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ARMED FORCES Management

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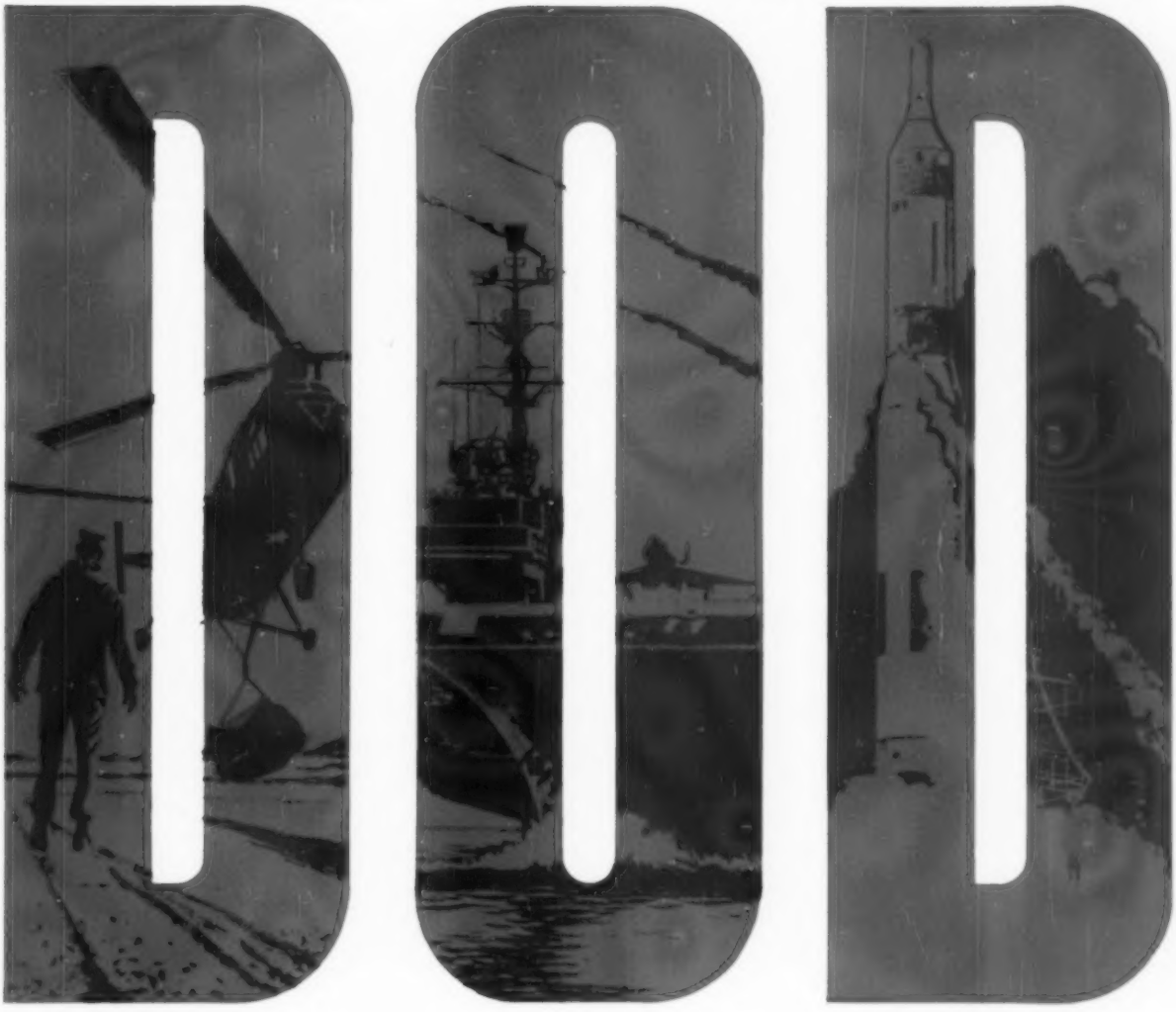
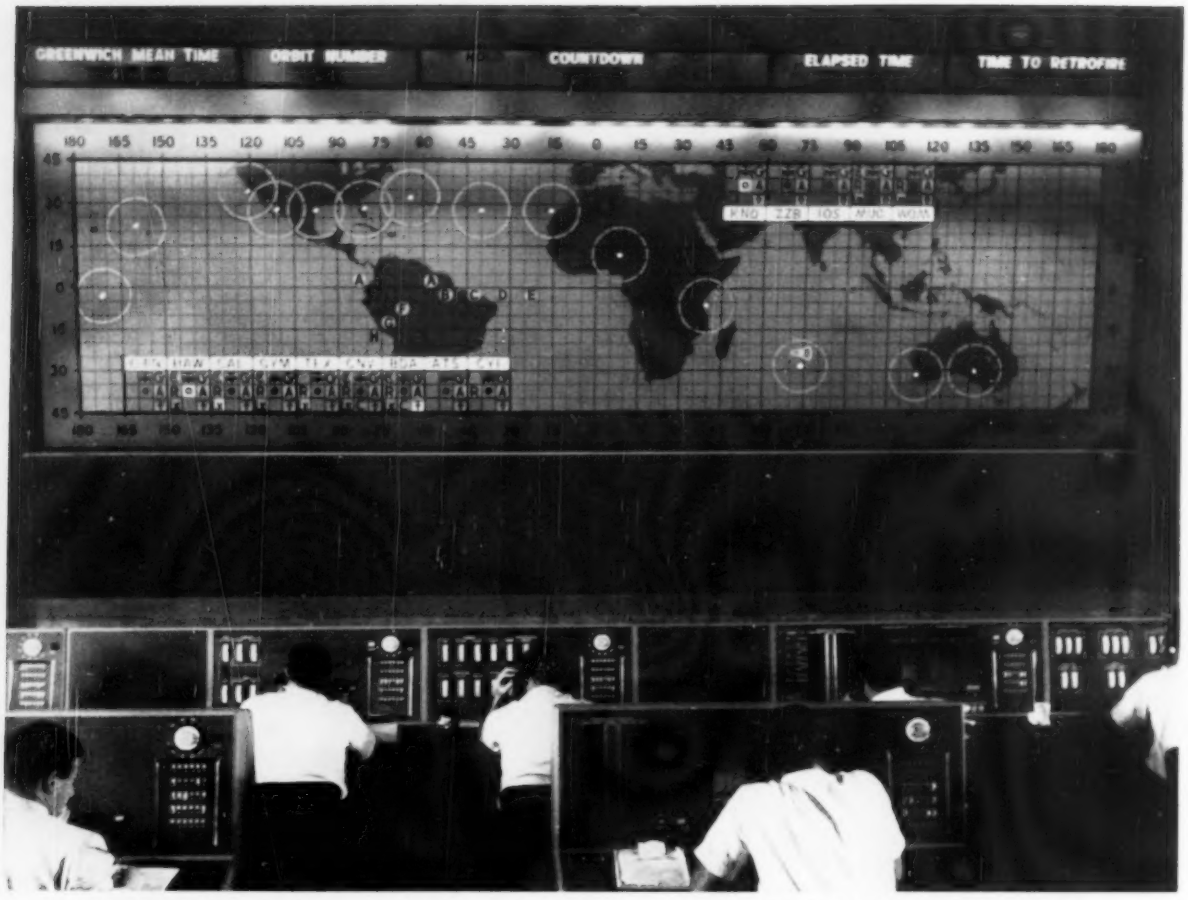
1961—Year of dramatic changes



Top management's annual report on major problems and progress—complete contents page 5



In Mercury Control Center room at Cape Canaveral, designed under supervision of Bell Telephone Laboratories, NASA flight controllers make all vital decisions concerning a Mercury mission. Large map displays equipment status at tracking and communications sites, preferred recovery areas, the position of the capsule and its "immediate impact point."

Bell System manages building of global communications network for Mercury spacecraft

On September 13, National Aeronautics and Space Administration first achieved the orbital flight of an unmanned Mercury spacecraft, using a new world-wide communications and tracking network.

Soon, will come manned orbital flight.

The Bell System has played a large role in the development of this scientific project.

Western Electric headed an industrial team, on which Bell Telephone Laboratories also played an important part, in building the world-wide network of tracking and monitoring stations.

This 60,000-mile communications route, the bulk of which is teletypewriter and telephone circuits, ties together 17 tracking and instrumentation sites with the Goddard Space Flight Center in Greenbelt, Md., and the Cape Canaveral Mercury Control Center.

As a Mercury capsule orbits over the area covered by each site, the far-reaching communications network immediately begins feeding information received from the capsule with clockwork precision. So fast and efficient is this communications system, it takes only seconds for data to start flowing from any site through Goddard to Canaveral!

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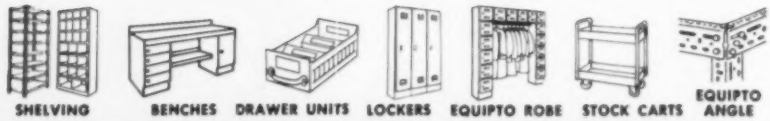

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Volume 8—No. 2

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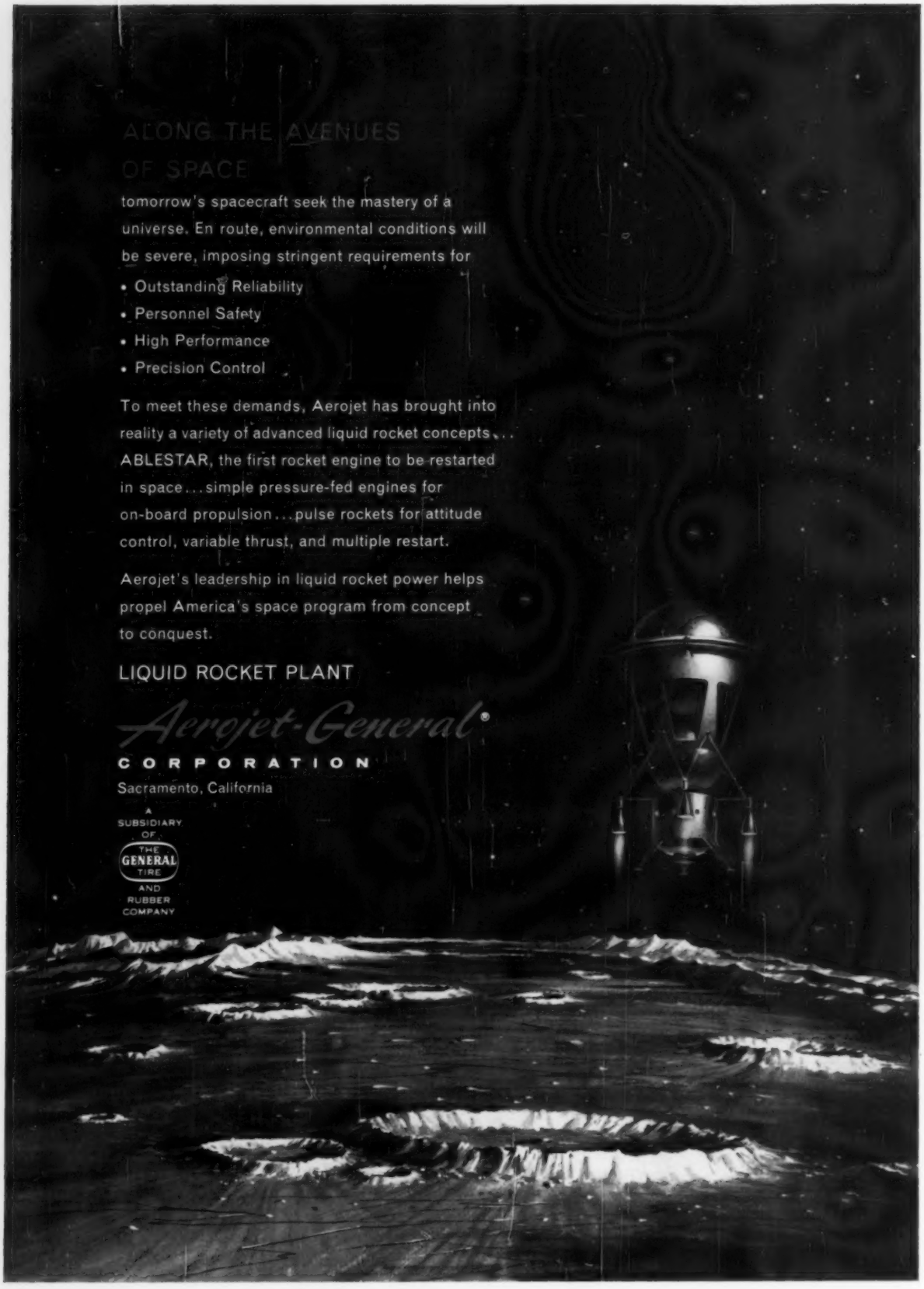
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An Analysis of McNamara's Whirlwind

EACH NOVEMBER, ARMED FORCES MANAGEMENT'S editors present this "top management annual report." The object: give the men responsible for Free World military security, and their industry hardware suppliers, an analysis of the major events of the past 12 months in Defense business operations and a look at what the next 12 months is likely to produce.

Two years ago, this meant a breakdown of the U.S. Defense Department's major Pentagon organizations to give you a proper background for the rash of debates going on then over why those same organizations ought to be changed—or abolished. (Some top Pentagon offices are still using that issue for historical information.)

Last year, the entire issue was devoted to Defense problem areas ranging all the way from our national strategy philosophy through the suddenly critical headaches of the too-long-neglected NATO alliance down to "research and development—just who is responsible for what?" (To the inordinate pride of our editors, who had to sift literally waist-high stacks of documents, the trends they spotted, in practically all cases, either have, or are about to become fact.)

This year, AFM's theme can be summed up in one word, "McNamara," and the issue is truly a "top management annual report." This has meant talking to every top man in the organization, from McNamara on down, and, even beyond that, questioning directorate, division and even branch chiefs (besides the usual analysis of those waist-high stacks of documents).

THERE IS HARDLY any doubt in anyone's mind, in the U.S. Defense establishment at least, that the real revolution in Defense management in 1961 took place on the third floor, E-ring, of the Pentagon. Defense Secretary Robert McNamara's leadership has given the morale of most of the Pentagon organization a boost which the concrete cobweb's veterans had concluded long ago was impossible for any one man to do.

And to earn, as McNamara did just three short months after he took office, the accolade of "best Secretary of Defense since Forrestal" is no idly tossed bouquet. It means running, in topnotch fashion, an outfit with over $150-billion in assets; an outfit whose policies *directly* affect the activities of nearly 9 million people and their families; an outfit which performs every imaginable service, is the largest purchaser in the country and, next to the Interior Department, the largest real estate operator. (Clue to their size: surplus sales of "junk" alone return to the Government $300-million each year.)

Typical comment on his management ability: "He has so many inputs, he is often better informed about a particular problem than the experts who are briefing him. He moves like a whirlwind and apparently never forgets anything." Actually, McNamara's major contribution so far to Defense operations amounts simply to *doing* nearly all the things that knowledgeable Pentagon staff professionals have been saying for years ought to be done.

But in sweeping out the cobwebs, McNamara has paid a price. Time will refund the money eventually, but time is, and always has been, a precious commodity in Defense. The major purpose of this issue is to help shorten that span, clear up some of the confusion his sprinter's pace has naturally generated, confusion over what he expects of the organization and why.

IN SUM, our editors are attempting to "explain the explanation"—a process any Defense manager (who has ever gotten a directive in the inter-office mail) is intimately familiar with.

It takes time for an organization to realize just how much of what kind of freedom its various members have. Theoretically, the problems of implementation created by McNamara's arm-long list of well-started programs will take care of themselves. Practically speaking, this happens only when the people translating the orders clearly understand their assigned responsibility and know precisely how much authority they have.

If McNamara is to have a prayer of making this organization run the way he contends it must (without trying the impossible job of doing it all himself), the men on the firing line must know such things as: (1) he expects prompt decisions, (2) they must assume responsibility, (3) not seek excessive advice.

ESSENTIALLY, McNamara faces the same general management problems as Defense industry suppliers at the other end of the line. In the maze of complex bigness that is Defense operations, he is trying to communicate with a monolith. But, contends McNamara, it is not the size that is the danger in Defense organization but the complexity. And in every area where he bangs that well-publicized "mailed fist," McNamara builds each move around one code word, "simplify." His goal: "we can act twice as fast as we now do. If a project now takes six months, we can do it in three; if it takes one month, we can do it in two weeks." (With surprising, or maybe not-so-surprising, unanimity, his top people—including the Service secretaries—label this same decision making-communications snarl their biggest problem, are surprisingly alike, too, on how to solve it.)

"There is an unexcelled wealth of capable people in this organization. They must spend more time utilizing their ability and less time justifying it."

C. W. Borklund

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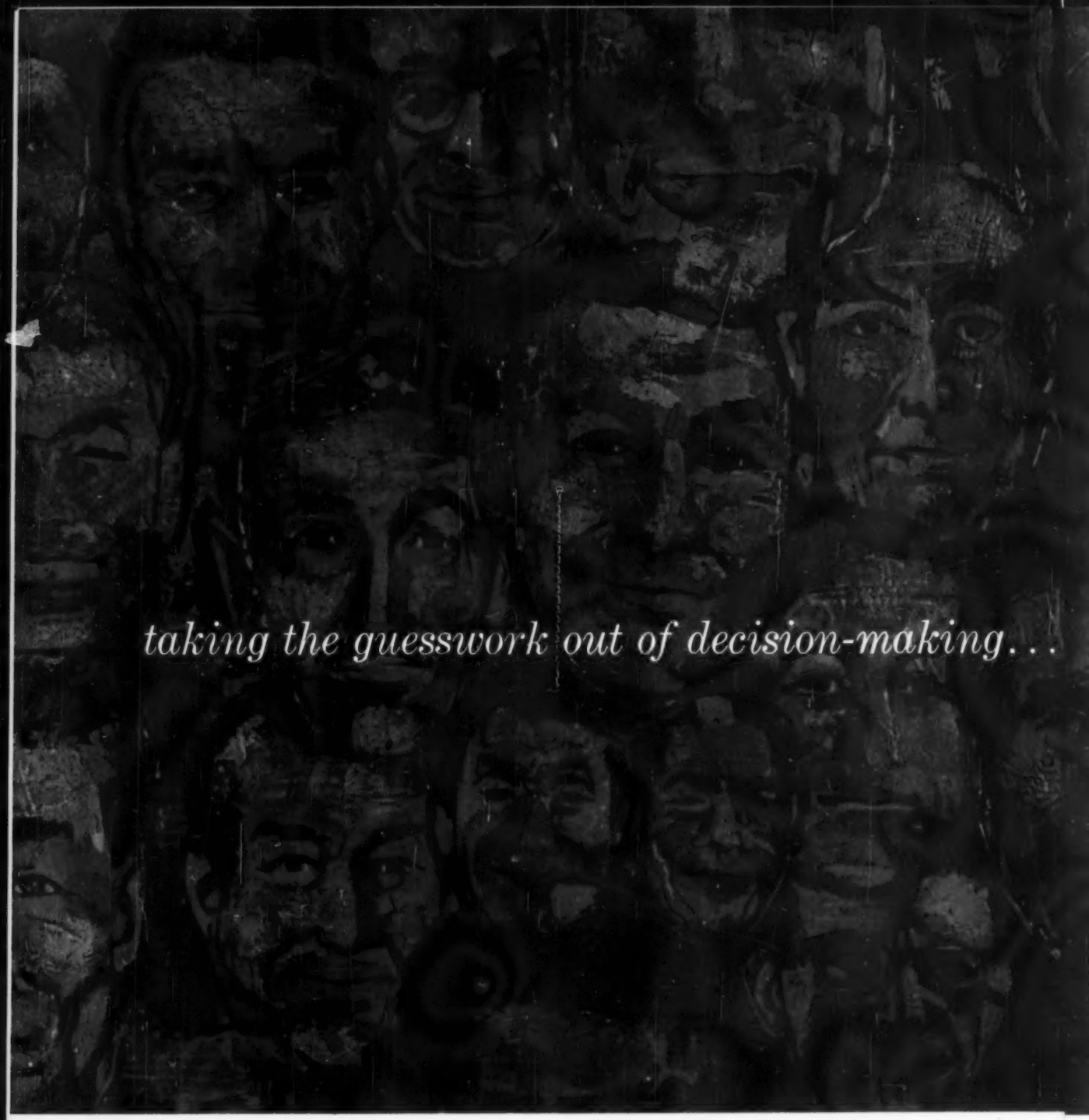

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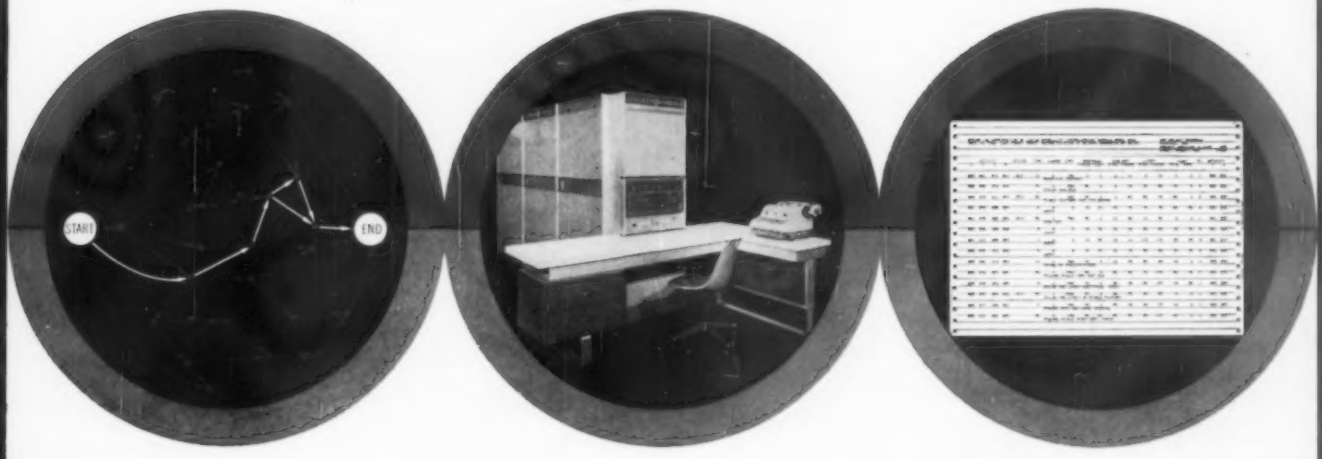

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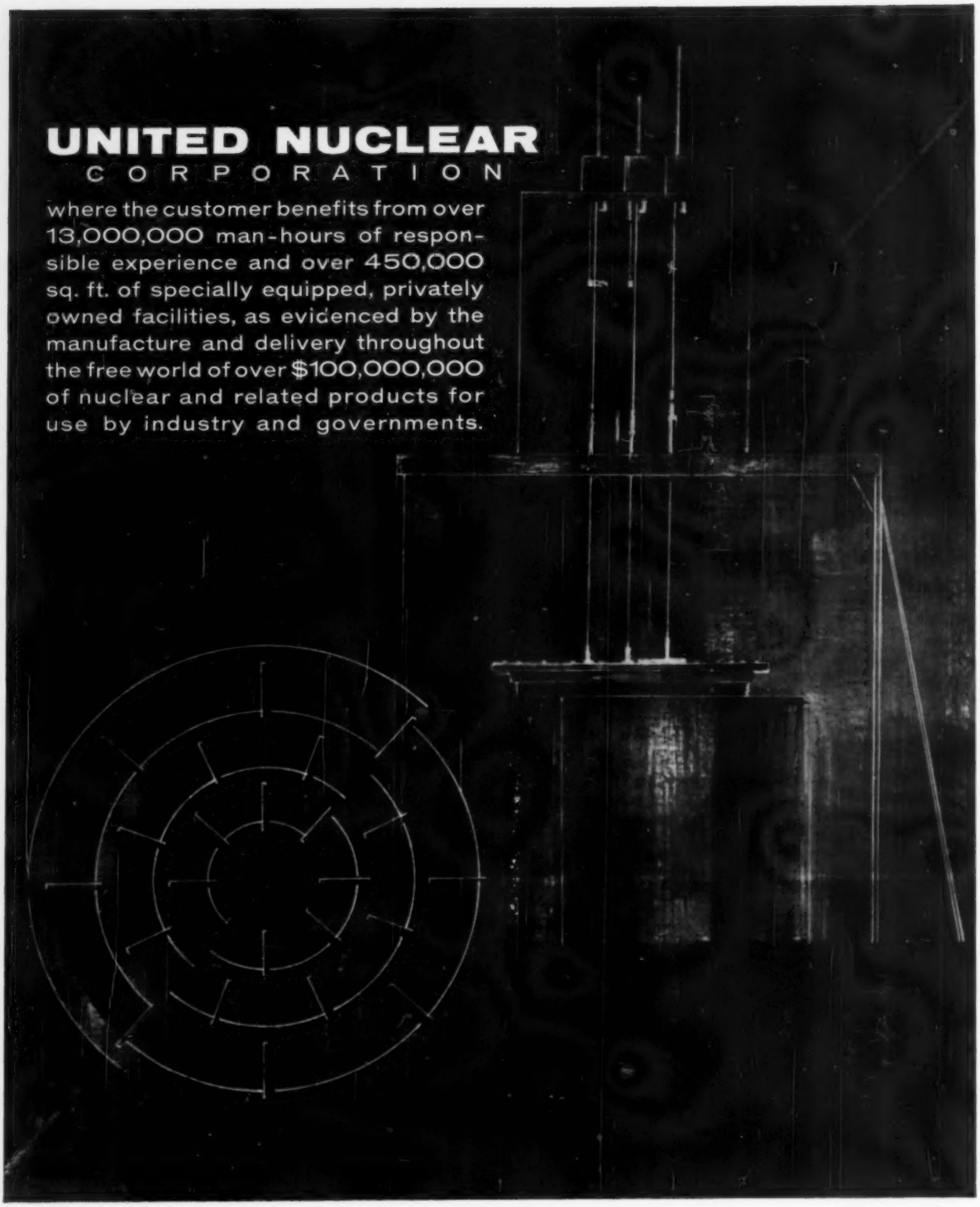
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Long lead time is essential to the development of large nuclear space power systems. Present methods of power generation would require an impractical heat rejection surface nearly the size of a football field for a power output of one megawatt—power which will be needed for critical space missions already in the planning stage.

Garrett's AiResearch Divisions have now completed the initial SPUR design studies and proved the project's feasibility to supply continuous accessory power and low thrust electrical propulsion in space for long periods of time.

Cutting projected 1 MW power systems to 1/10th the size and 1/5th the weight of present power systems under development will be possible because of SPUR's capability to operate at higher temperatures, thereby sharply reducing the required radiator area.

Garrett has been working with the Air Force and the Atomic Energy Commission on SPUR as the prime contractor for more than one year and has more than five years of experience in space nuclear power development. Also an industry leader in high speed rotating machinery, heat transfer equipment, metallurgy and accessory power systems, the company is developing design solutions for SPUR in these critical component system areas.

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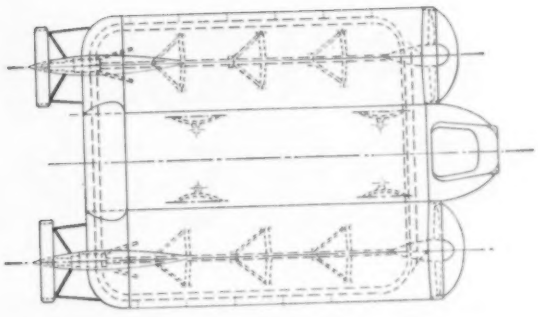

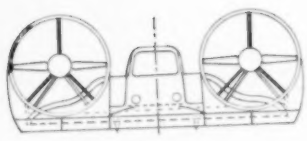

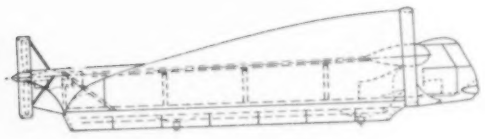

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Although planned for different payloads and missions, both are highly maneuverable, simple to operate and easily and quickly serviced. They are intended to be specific answers to the problems posed by the limitations of conventional transportation.

The smaller of the two Aeronutronic-designed vehicles will weigh 8,000 pounds, carry a 2½ ton payload, cruise at 40 mph. It will have a range of 100 miles and a grade capability of 30%.

The big machine is a high-speed, heavy duty carrier. Weight: a hefty 44,500 pounds, payload: 22,000 pounds, speed: a fast 80 mph, range: 300 miles. It, too, will have a grade capability of 30%.

In spite of this evidence of accomplishment, Aeronutronic's work in the field has just begun. Army Transportation Corps and Navy contracts are speeding further studies into the potentialities of the new vehicle. The ACV is destined to play a significant role in future military and civilian transportation.

Further information regarding the air cushion vehicle, as well as other exciting projects in work at Newport Beach, may be had by writing to Aeronutronic.

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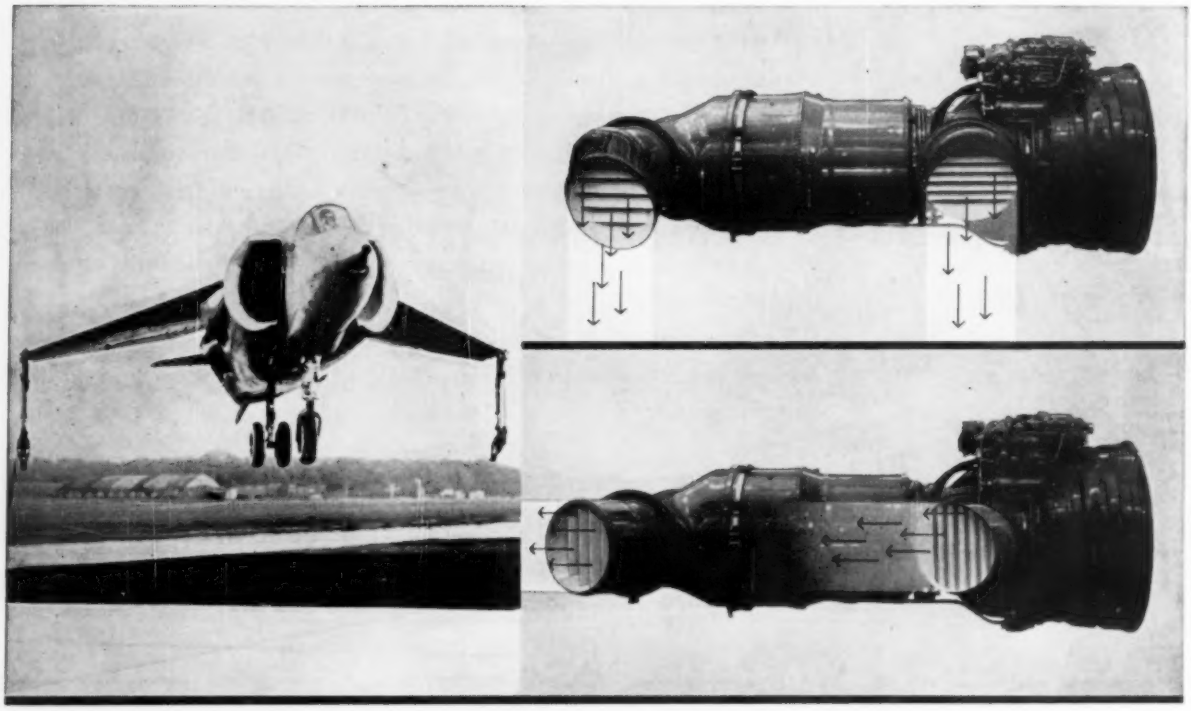

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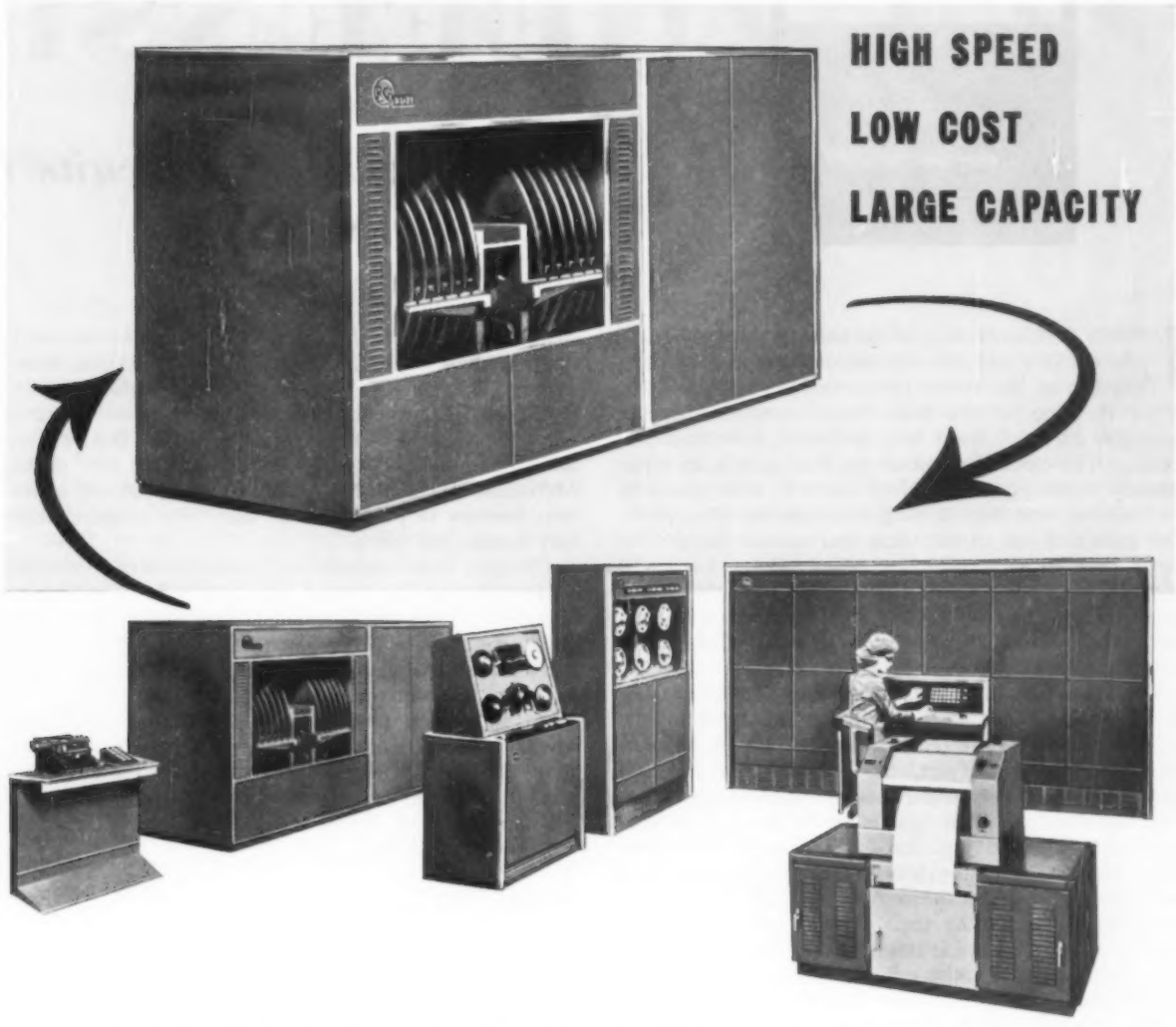

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DEFENSE

DOD's Circuits Re- u

LONG TIME residents of the nation's Capitol equate the use of electricity with important activity. Lights ing late at the White House and in the Executive Office Building, at the State Department and at the Pentagon nurture rumors that important news is forthcoming. The electricity bill at the Pentagon is up since January: lights come on before dawn in many parts of the building, and stay on long after dark in other parts. The increased use of electrical and human energy has partly been to solve recurring crises—Cuba, Laos and Vietnam, and Berlin. But in a large measure the higher electricity bills are due to the efforts of Robert Strange McNamara, seventh Secretary of Defense, to streamline the Pentagon organization.

The formation of a modern military machine capable of keeping the peace has meant that greater coordination must be effected between the military planner, the foreign policy expert, the scientist, the financial wizard, the weapons designer and the logistics authority. The experience of these and many others with special knowledge must go into the final product: a military force equipped with the proper weapons to deter any potential aggressor on the most likely battlefields, with the mobility to assume their proper positions on the Free World's ramparts at the precise moment, and with the supplies needed to stay there as long as necessary.

Coordination between the special disciplines that comprise military planning and action has always been present. But technology and a changing world have expanded the number of weapons, battlefields, and alternatives open to a would-be aggressor. Wars can be fought under the oceans or hundreds of miles into space, in the field, with or without nuclear striking power, or in mountains and jungle against hard to find, hard to fight guerrillas. Weapons take longer to develop, and their greater cost eliminates the opportunity to try them all before determining which are best.

All of these complicated, interlocking factors convinced McNamara and his top associates that the Defense establishment had to be reorganized if it were to meet its mission. One of his first acts as Secretary was to establish the Office of Organizational and Management Planning to analyse the architecture of the world's largest organizational structure to see where it could be simplified, made more effective. Before they hardly had time to lay briefcases on their new desks, McNamara demanded from his newly appointed assistants answers to problems that had been plaguing military leaders for years.

Changes came rapidly. A "common sense" method of formulating the budget was initiated, promising to reveal the true cost of alternative weapons systems. In the future, the Army's strategic combat forces and the Air Forces combat support aircraft forces were to have the same commander. The Air Force was given the space mission, and Army and Air Force missile site activation units were placed under a joint command. The Joint staff was expanded and strengthened, as were the functions of the Policy Planning Staff of the Assistant Secretary of Defense, International Affairs.

Further Changes Planned

Every principal DOD staff office was reorganized, simplified, as was the Air Force research and logistics organization, as will be Army's technical service structure.

The Defense Communications Agency was strengthened, and unified Supply and Intelligence Agencies were created at the DOD level. An Office of Programming was established under the Assistant Secretary of Defense (Comptroller) and 424 DOD committees were guillotined with 129 more waiting to be led to the scaffold.

Future months will bring further changes as McNamara's management pathfinders find new, shorter routes through the Pentagon maze.

The changes, McNamara hopes, will render easier the difficult task of finding out what blend of defense

E ORGANIZATION

Re- wired for Central Power Control

forces can best carry out the national policy, what type of weapons can do the job for the cheapest price, and how can these decisions be arrived at in time to meet the need.

Best answers to these questions have come from the third floor where the Assistant Secretaries of Defense plan for the future. No longer does the military man go his way and the administrator his, carefully not treading on each other's toes. Technology has forced scientists to know the military needs and vice versa, and for both to know the foreign policy outlook and the budgetary limitations. All of these considerations must be given weight if the ultimate decision is to provide security.

Organizational Transition

McNamara's move towards a more centralized Defense establishment has been accomplished without seeking legislation to eliminate the three military departments, as the report prepared for the incoming President by the Symington Committee had suggested. But his moves have effectively strengthened his and the hands of his principal aides—the third floor Assistant Secretaries of Defense.

The changes within the Department of Defense during the past nine months are too extensive to chronicle in one issue of ARMED FORCES MANAGEMENT MAGAZINE. This issue is devoted to that area where the most significant changes have occurred: the third floor and the Assistant Secretaries.

The January issue will be devoted to an analyses of the present and future role of the Joint Chiefs of Staff, and whether or not, as some military observers maintain, they have been bypassed.

If the Pentagon's rate of change under McNamara maintains its present pace through the coming year, AFM's editors may find it even more difficult—in next November's special issue—to report them all or to guess at their significance. We can only try to present it in such a manner that Defense managers understand the scope, the effectiveness and the purpose, for the greater the change, the greater the need for information.

It is obvious that the Pentagon is in a period of organizational transition, and what the final shape and form of the U.S. defense establishment will be. Much depends upon the effectiveness of the present changes. If they are not sufficient to an adequate defense organization, then plans for a more streamlined, more centralized organization will follow.

Baring unforseen events, the present Secretary of Defense will stay in office four, and possibly eight years. During his first nine months he has given us a clear message of what we can expect from him in the future. He is not afraid to break with tradition or ignore accepted patterns of government operation. He believes in placing responsibility on individuals and not offices. He also believes in working himself and his subordinates hard. He is sincere, and his only apparent goal is a more efficient, more effective Department of Defense.

This magazine has already gone on record in its belief that the McNamara team has accomplished more in its first nine months than has any other group in comparable Pentagon history. Our September "View From Here" concluded: "We have disagreed with many specific proposals of the McNamara team, but find it most refreshing (as do many Pentagon people who have lost an argument or two) that after over a decade of wandering around trying to figure out who was calling the shots, there now is absolutely no questions in anybody's mind about where to go to get a decision in a hurry."

Four or eight years hence, when the present Secretary of Defense steps down from that office, we predict there will be as little similarity between the Pentagon he leaves and the Pentagon he came to as there was between the United States formed by the Constitution and the United States under the Articles of Confederation. ■

At 6:45 most mornings a black limousine will glide along the almost empty streets of northwest Washington towards the foggy banks of the Potomac River and into the road-maze leading to the Pentagon. Its occupant, a youngish looking, bespectacled man in a conservative dark suit would probably have difficulty relating what route his chauffeur takes or what landmarks he passes. The limousine is his second office (the first starts in his bedroom and ends at the breakfast table). Hidden behind pages of the morning papers or documents culled from an ever present briefcase, he is usually too occupied with the management problems of running the world's largest organization to watch scenery.

The limousine will halt before the River Entrance to the five-cornered nerve center of the Free World's defense forces, and Robert Strange McNamara, a very impatient Secretary of Defense will have his work-day interrupted while he changes offices. While he rides unnoticed up the escalator to the third floor, activity is already bustling around him as Defense officers and managers who arrived before him seek answers to problems he has posed, make the decisions he has demanded, and secure the information he needs.

When he reaches his large polished desk (behind which hangs a picture of his distinguished predecessor James Forrestal), his staff is waiting to begin where it left off the evening before.

Time—7:15. There are calls to find out how certain individuals are coming along on problems he has assigned them, and to prod them if necessary. There is a hurried conference with his junior partner, Deputy Secretary of Defense Roswell Gilpatric to coordinate their activities. A

Secretary of Defense

Robert S. McNamara

"Committees Are of

The man with the mailed fist is impatient and dis-satisfied, even though he has set a "get-it-done" tone of leadership in Defense which has veteran Pentagon chiefs awed and elated. Says the boss, "Frankly, I think we have a long way to go."

AN IMMEDIATELY discernible quality of Robert Strange McNamara, seventh Secretary of Defense, is his impatience. One of his goals is to instill this impatience into those who run the U.S. military establishment.

Worrying McNamara most is the amount of time it takes to make decisions.

"It's quite apparent decisions are not being made as fast as they could be . . . the Defense establishment could do everything twice as fast as presently," the Secretary told AFM's Defense task force last month.

"If we are to achieve our primary mission . . . obtaining the optimum amount of combat power . . . decisions must be made promptly . . . too much time slows up our most important projects."

President Kennedy campaigned on the issue that the U.S. defense posture was not adequate, and McNamara was charged with the job of changing this. Though more changes in organization, planning and strategy have been made during McNamara's first nine months in office than under any previous Secretary of Defense during a comparable period, McNamara is not satisfied: "Frankly, I think we have a long way to go."

McNamara's approach to his job amounts, basically, to ignoring many of the traditional patterns of govern-

call is made to the Secretary of the Navy John Connally, who has been assigned the logistics problem in the current Berlin crisis. General Counsel Cyrus Vance is called to find out when a particular proposal to reorganize a certain area of Defense activity will be ready. An appointment is made for Charles Hitch to get a progress report on the formulation of the new "program package" budget.

International Security Administrator Paul Nitze follows Hitch to report on the studies being made on how much of what type of defense is really needed for maximum national security. A note is made on subjects McNamara wants to discuss at the next meeting with the Joint Chiefs, at which the Laotian crisis will be studied.

The President calls for information and advice, and Assistant Secretary of Defense (for Installations and Logistics) Tom Morris would like a few minutes later in the day to discuss recommendations for more base closings. Defense Research and Engineering has provided further information to be scrutinized concerning practicality of continuing the development of the B-70 supersonic bomber. Time has been alloted for an afternoon press conference and for a late afternoon interview with two reporters, scheduled by Assistant Secretary of Defense for Public Affairs Arthur Sylvester.

Between appointments, phone calls, and all interviews, the Secretary reads from the large stack of reports on his desk, and dictates memorandums.

At 6:30 p.m. the reporters leave, and McNamara spends a half-hour cleaning up his desk and stuffing papers into his briefcase to read that night. The limousine pulls away from the Pentagon at dusk, its passenger's vision blocked off from the passing scenery by another stack of paperwork. ■

Value Only for Exchanging Ideas"

ment operation and substituting a system based on the simple logic that it is more effective to deal with people than offices.

"I look to a particular individual in a position of responsibility rather than to an office," he said.

The "particular individuals" he looks to are the high-priced talent on the third floor, E-Ring: the service Secretaries and Chiefs, the Assistant Secretaries, Assistants to the Secretary, the Director of Research and Engineering, and the Deputy Secretary of Defense.

How well these men do depends on how well their subordinates perform. They are held accountable for every office under their jurisdiction.

And it is with every level of the Defense establishment—from the lowest level of service organizations to the top level DOD offices they report to—that the Secretary is dissatisfied with the amount of time it takes to make decisions.

One of two major evils which McNamara believes slows down the decision making process is the tendency to appoint committees and to "coordinate"—or cover your rear as they say in Pentagon circles.

McNamara allows that some coordination is necessary, but he thinks that many Defense managers who don't want to take the responsibility for decisions attempt to coordinate that decision with everyone who might possibly object to it, delaying the decision for weeks or even months.

He gives warning that he will look with more favor on the manager who after adequate consideration makes a prompt decision that proves to be wrong than he will on the manager who delays a decision, seriously bogging down the whole defense operation.

"Almost any action is better than no action," he believes.

McNamara doesn't hold with committee decisions, asserting that "a consensus of opinion is usually almost no opinion at all."

"Committees are of value only for the purpose of exchanging ideas . . . the individual in the position of responsibility must make the decision and take the responsibility for it," he stated. Proof that this is not just talk: Since becoming Secretary, McNamara has eliminated 424 DOD committees and scheduled 129 more for deactivation.

Besides committee coordination another evil slowing down Defense decision making, McNamara contends, is the complexity of the organization. "Size can be managed if simplified . . . complexity is the biggest threat to an effective and efficient organization."

McNamara points to the sorry attempt to produce the M-14 rifle as an example of how complexity can bog down a program. His solution: simplify the chain of command and place one man in charge who can be held responsible.

Some of the efforts to simplify the world's largest organization initiated by McNamara include: the elimination of two Assistant Secretaries of Defense, the formation of the Defense Supply and Intelligence Agencies, the institution of understandable "program package" budgets, realignment of the functions of many DOD and service offices, reorganization of Army and Air Force missile site activation units, putting the Army's strategic combat troops (STRAC) and the Air Force's combat fighters (TAC) under a unified command, closing marginal bases, and giving the Air Force organization the primary responsibility for the military space mission.

Nor is McNamara through "simplifying."

He has asked the Army to come up with recommendations for its reorganization, for studies of "services" common to more than one military service to see if they can be reorganized and unified, and for "an investigation of the Defense Communications Agency to check on how well it is functioning after one year in operation."

Will final "simplification" be the establishment of a single service?

"It's too early to tell," McNamara thinks. He wants to study how the Defense establishment will operate after the present reorganization is finished. The changes being made within the present framework of the three Services, he suspects, "may go a long way towards eliminating the need for" a single service, or more specifically a single staff at the Pentagon level.

Predictably, all the whirlwind activity he has stirred up in those areas most analagous to private industry operations has resulted in comments that he "puts too much stress on management and organization and not enough on military planning and strategy."

Such gripes disturb him. Aware of the unfortunate way "management" was introduced into the military some years ago, he rarely passes up an opportunity to point out: "moves to streamline the organization will result in savings of time and other resources, and more effective decisions in all areas. The military leader will have more and more reliable information at his disposal to make his essentially military decisions."

His reasoning: until—at the top level—the political and military determinations provide the necessary guidelines on what types of defense forces and equipment are needed, until the weapon systems development and production decisions are made and until the required organizations are picked (or formed) to carry them out, the military decisions on weapons and resources deployment can't be made.

"You can't make decisions on accounts receivable," he contends.

McNamara sets his own example of what he means by prompt decisions. A voracious reader, "he apparently never forgets anything he sees," sums up one staff man. It's probably a good thing he doesn't. His challenge to the Pentagon staffs ("I want real alternatives that actually call for a decision, not just a paperwork invitation to rubber stamp something") has resulted in his being snowed by mountains of written conversation. (When AFM interviewed him there were four stacks of documents on his desk, each better than a foot and a half high.)

To get tomorrow's results (like those depicted above) today, means "decisions twice as fast."

It is from this mountain of material that decisions pour out in rapid fire fashion. He has acted so quickly on some problems that he has been criticized privately for "being too hasty"—a result, says one staff assistant, "probably of something that was becoming a tradition around here. It's been epitomized by another military man, named Romulus, who said, 'Let's make haste slowly.' We intend to see that a new tradition is written."

Pointing out that little can be done before a decision is made, the Secretary adds that few decisions, rapidly dispensed or not, are irrevocable. "A decision can usually be modified or revoked with less damage and more progress than if the decision had not been made at all."

Since taking office, he has formulated a growing list of thorny problems he wants solved. (The list now has close to 200 entries but some of the ancient ones, i.e. two or three months old, have already been handled.) He fires these around the building asking individuals to come up with answers. McNamara will then pick one of the alternative solutions, assign the implementing job to an individual—usually the one whose answer he bought. Then, on sometimes an almost weekly basis, he demands progress reports to "make sure progress doesn't fall between the chairs."

Blunt in his criticism of the decision-making lag ("Anything that used to take six months, we ought to answer in three from now on; anything that used to take two weeks, will now be handled in one") he is nonetheless impressed by the quality of leadership of both his civilian and his military top management, impressed even more by their willingness to get behind a project once the decision is made. "Even those not in favor of a certain decision have gotten in line and given it magnificent support," he said.

He believes further that the new team heading up the Defense operation is "one of the most competent ever put together, in or out of government." With him no idly tossed bouquet (other Defense Secretaries have said much the same but usually on their way out of office) he demonstrates that he knows what he's talking about, usually, by following his accolade with an almost amazingly detailed rundown on key assistants, their backgrounds, education, abilities, etc.

Naturally, he's happy that all this talent is around. Main reason: "I like to have people smarter than I am working for me." As far as his staff is concerned, even at the Service level, finding someone smarter than the usually smiling, apparently always relaxed, well camouflaged dynamo named McNamara is going to take some doing.

McNamara finds some satisfaction in his "dissatisfaction," and hopes that most of his team members are also "dissatisfied." Proud of the accomplishments made in the first nine months, he becomes pessimistic only when he views the job yet to be done.

The day he becomes satisfied with our military strength and the organization of our defense establishment, McNamara believes he will then have lost sight of the profound problems facing him, and will not be accomplishing as much as he should. Safe bet: if the creeping complacency ever shows up at all, it will be a long time arriving. ■

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Deputy Secretary of Defense

Roswell Gilpatric

Veteran Defense top administrator and long time advocate of "more unified control of the Armed Services," Gilpatric sees two major problems today: the time needed to make a decision; and the tieing of military power to national policy.

"The thing that frustrates me most . . . ."

ROSWELL GILPATRIC, junior partner in the defense management firm of McNamara & Gilpatric, could easily win titles among top Pentagon officials as being the best dressed, the bluntest spoken, the most knowledgeable on broad defense problems, and, surprisingly, the least heard from —at least by the public.

His job, according to his own definition, is as "sort of a junior partner in a job so big it's more than any one man can possibly handle by himself."

An ex-Assistant Secretary and Under Secretary of the Air Force and a member of President-elect Kennedy's committee to come up with a reorganization plan for Defense (headed by Sen. Stuart Symington), Gilpatric had been considered for the top Defense post. He was called at 5 a.m. one morning by Kennedy's final choice, McNamara, who asked: "will you work for me?"

Gilpatric, a sandy-haired, rapidly greying six-footer, looks as if he just stepped out of a Madison Avenue ad for executive men's clothes. Having stirred up controversy about the way the Defense establishment has been run since he first worked there in 1951 (he once said: "They used to draw lots in the Joint Chiefs of Staff to determine the relative combat importance of airplanes, ammunition and warships."), Gilpatric's soft-spoken but blunt manner gives the lie to his self-description: "A colorless individual with a weakness for sailing and tennis."

Gilpatric is an advocate of what he calls more "unified control of the armed services."

As a member of the Symington Committee, he recommended the eventual formation of a single service. He now admits this is "far down the road," and may not be necessary because of the reorganizational surgery performed by NcNamara.

Before reasserting that a single service is still needed he would like to assess how present reorganizational moves work within the present three-service structure. The impressive steps taken so far, he believes, are the reorganization of the Navy Bureaus two years ago, reorganization of the Air Materiel R&D this year, the establishment of the unified Defense Communications, Supply and Intelligence Agencies, transferring the space role to the Air Force and other roles to a single service, and the combining of STRAC and TAC under a unified command.

One upcoming reorganization long-overdue, Gilpatric believes, is the reorganization of the Army—especially the Technical Services which presently are semi-independent "part technical, part supply, and part operational agencies."

Having, as a single service advocate, called for the elimination of the three service secretaries, Gilpatric now sees a useful role for them under the system NcNamara is establishing.

"He (McNamara) is using the service secretaries as operating Vice Presidents rather than having them just represent service viewpoints," Gilpatric states. An example of this "work pattern" was the designation of Secretary of the Navy John Connally to take charge of transportation planning (both sea and air) for the present Berlin crises.

The purpose of present reorganization moves, according to Gilpatric, is not necessarily to give the Secretary more control ("the power of the purse by itself is pretty damned potent"), but to give him the information he needs to make decisions and to get prompt decisions to problems further down the chain of command.

The big change, from Gilpatric's viewpoint, is that the Secretary of Defense now utilizes the powers of that office—something that had to happen before there could be a unified approach to defense problems.

One change Gilpatric is enthusiastic about is the revision of budget procedures so that, for the first time, fiscal implications of the various program alternatives will be spelled out.

"When the program package system gets going—and this year is not a fair test—the Secretary will be provided with more of the information he needs to make decisions . . . the Budget can be changed from an oppressive document into a creative and dynamic one."

The two major problems confronting the Department of Defense presently, Gilpatric believes, are: (1) the amount of time it takes to get a decision; and (2) the problem of how to apply military power to aid national goals.

"The thing that frustrates me most is the time it takes to reach a decision . . . it's the greatest single deterrent around here," Gilpatric asserts.

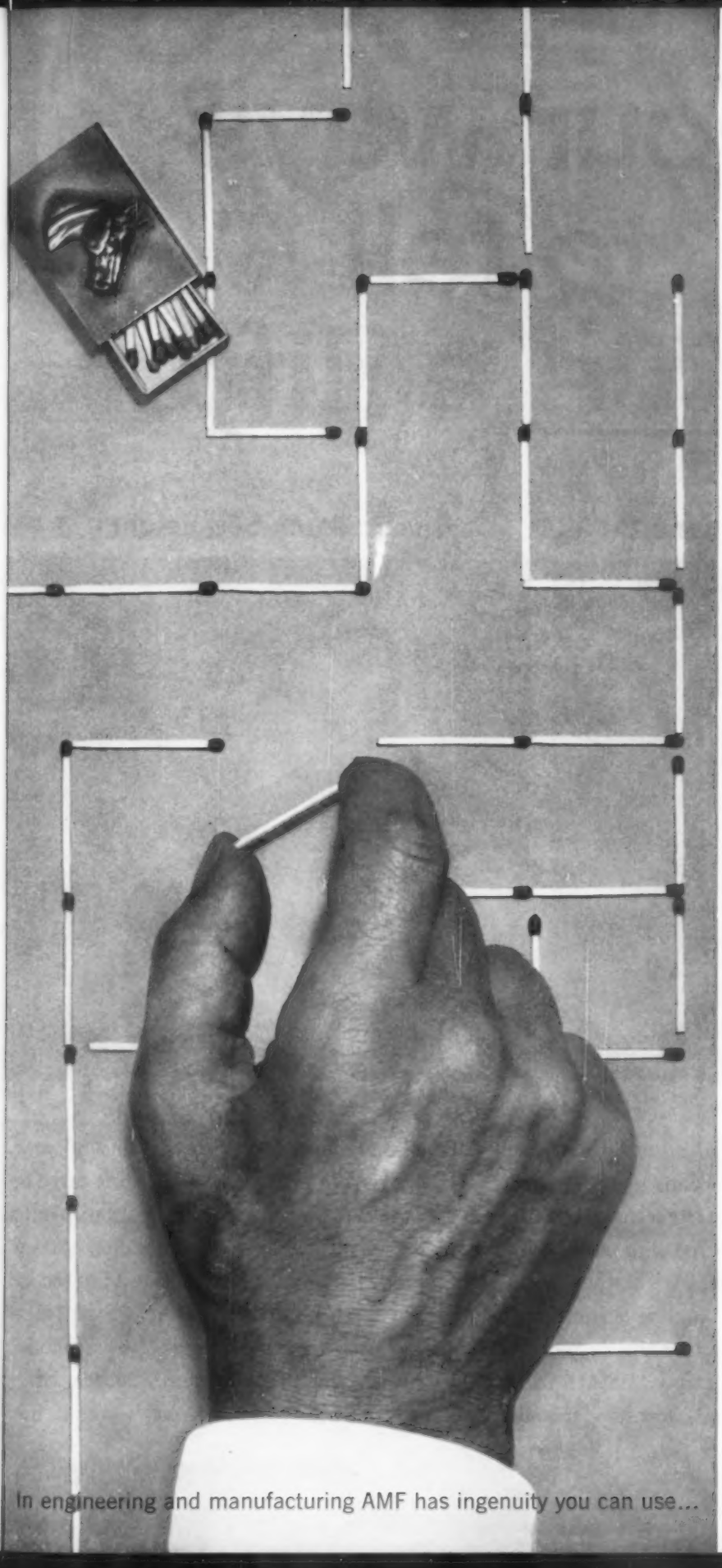
Though present reorganizational moves should do much to condense the decision timetable in the future, Gilpatric thinks that reorientation in the thinking of some defense managers is also needed.

Gilpatric predicts that the biggest problem confronting Defense management for years will be how to make effective use of military force to achieve national policy objectives.

Here some headway has been made by having the policy people in International Security Affairs work more closely with the Joint Staff, and by achieving greater coordination between them and budget experts.

"Despite talk that the Rand people are taking over and making military decisions," Gilpatric believes that the ISA and Joint Staff have worked well together, and may find some basis for a more permanent solution to the problem.

Gilpatric confesses he is busier than he ever was as a lawyer or during his previous stints in government. He reportedly told one observer that he "should have expected this from a man who would call me at 5 a.m. to offer me a job." ■



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DEFENSE RESEARCH AND ENGINEERING

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RESEARCH AND ENGINEERING

Arthur Sylvester
PUBLIC AFFAIRS

Charles J. Hitch
COMPTROLLER

Steuart Pittman
CIVIL DEFENSE

Elvis J. Stahr, Jr.
SECRETARY OF THE ARMY

John B. Connally
SECRETARY OF THE NAVY

Eugene M. Zuckert
SECRETARY OF THE AIR FORCE

Adm. George W. Anderson, Jr.

THE JOINT STAFF

Gen. David Shoup

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- ATLANTIC COMMAND
- CARIBBEAN COMMAND
- CONTINENTAL AIR DEFENSE COMMAND
- EASTERN ATLANTIC AND MEDITERRANEAN COMMAND
- EUROPEAN COMMAND
- PACIFIC COMMAND
- STRATEGIC AIR COMMAND
- U.S. STRIKE COMMAND

UNIFIED ORGANIZATIONS

DEFENSE SUPPLY AGENCY

DEFENSE INTELLIGENCE AGENCY

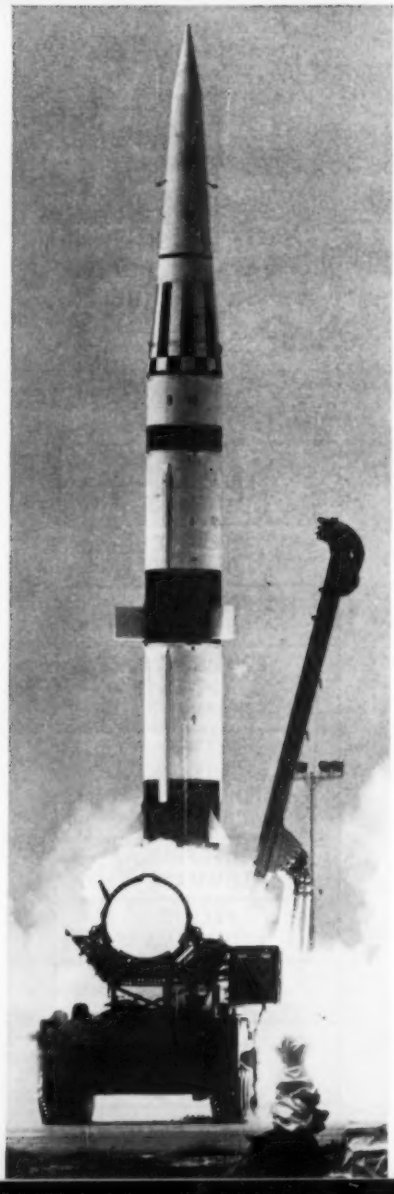
DEFENSE COMMUNICATIONS AGENCY

NOTE: DIA and DCA report to SecDef through JCS

Secretary of the Army
Elvis J. Stahr, Jr.

"We are far more likely . . . to find ourselves in situations of limited war . . . it cannot be denied that the Army will play a pre-eminent role under most circumstances..."

Army's Spokesman Asserts GI's Vital Role



The Army's Pershing: Still needed: the foot-slogging dogface

RECENTLY ACTIVATED reservists and newly inducted recruits will most likely have two experiences in common during their present Army careers: of receiving the most intensive training of their lives and of personally seeing their military boss: Secretary of the Army Elvis J. Stahr, Jr., the most traveled member of the Pentagon hierarchy.

The status of the foot-slogging dogface—the infantryman, his parachuting and armored carried brothers, and his armor and artillery supporters—has once again been elevated to a position of prime importance in the nation's defense plans. No longer is it thought that the nuclear device, deliverable by plane, missile or artillery shell is adequate to deter aggression or keep the peace. In Stahr's words, "we are far more likely . . . to find ourselves in situations of limited war than in an all-out thermonuclear conflict . . . it cannot be denied that the Army will play a pre-eminent role under most circumstances . . ."

This message the Secretary has carried to the field, to industry, to science organizations, to any group whose talents the Army could use that is willing to listen to him. This is also why he travels extensively: to convince the combat army of the importance of their role, to bolster esprit de corps, and to listen to combat commanders relate what they will need to fight "limited" wars—in the forested mountains of Western Europe, the arid deserts of the Middle East, or in the humid, rainy jungles of the Far East; against disciplined troops, or hard to find, harder to fight guerrillas.

Elvis J. Stahr, Jr. is a low-pressure, casual, placid appearing individual who speaks in a slow "hilltop" Kentucky drawl and possesses top drawer academic credentials. Although he has already excelled in two careers, as a lawyer and educator, he has had more experience with the Army and its problems than many of his predecessors.

As an English literature major he compiled the most impressive academic record in the University of Kentucky's history, and then proceeded to acquire three degrees from Merton College, Oxford University as a Rhodes Scholar. He has been Dean of the University of Kentucky Law School, Vice Chancellor of the University of Pittsburgh, and is presently on leave as President of West Virginia University.

Stahr's first acquantance with the Army began when he quit a lucrative law practice to join up as an Infantry shavetail a few months before Pearl Harbor. He was an instructor at the Infantry School until 1943. Because of his diploma in the Chinese language from Yale University he was then sent

to the Far East (China, Burma, and India) as a liaison officer with Chinese Nationalist troops. He was discharged in 1946—after having been awarded the Bronze Star twice in combat—as a Lieutenant Colonel.

His second job with the Army was as special assistant to Secretary of the Army Frank Pace, Jr. during the Korean War. He also served as Army consultant on manpower problems early in the Eisenhower Administration.

During his travels Stahr has taken stock of the Army and allowed the Army to take stock of him. He thinks it imperative that every member from the private serving in the Strategic Army Corps on Okinawa to the lonely sentry at a Seventh Army outpost in Germany understand that his organization is "charged with a peacetime mission as vital as any it has ever fulfilled in battle . . . no longer mere custodians of yesterday's military art, for the most part assigned to a dreary peacetime round of routine garrison duty at isolated posts . . ."

Wears Two Hats

In addresses to troops and civilian organizations, he hammers at the Army's present shortcomings and how the combined military-civilian, government-private industry team can to contribute to their fulfillment.

Though research and development efforts have kept the Army abreast of modern military technology, he relates that "only relatively small quantities of these really modern items . . . have actually been produced . . . which precludes calling ourselves as yet a thoroughly modern Army."

". . . we can consider ourselves particularly well off at present in the fields of improved firepower and battlefield communications, but development of battlefield mobility—that other essential to any Army that must shoot, move, and communicate—has lagged in comparison."

Stahr doesn't stand on ceremony. A typical position during an interview or conference in his office is to sit sideways in a stuffed leather chair with arms locked around knees, legs dangling over the chair's arm. He is a deliberate, careful talker, (making one of the easier jobs on his staff that of a stenographer, who almost has time to take everything down in longhand) evidencing an academic compulsion to convey his exact, precise meaning.

He believes that a service secretary, as described by the late Secretary of War Stimson, wears two hats: as administrator and decision maker of problems within his service, and as spokesman and proponent of the service to outsiders and superiors.

Stahr disagrees with single service advocates, believes that the basic triservice structure is the most effective for present, and believes there is a real need for the service secretaries.

He believes that the 60's will require a larger standing Army than existed during the 50's after Korea.

He is concerned about the time it takes to assemble all of the reliable facts, to make a decision on a complex problem, and equally concerned about decisions made without all of the relevant facts, and has ordered further studies to determine how greater use of data processing equipment can speed up the flow of necessary information.

He is impressed with the quality of Army enlisted men, and with the intelligence level and combat experience of the officer corps.

He is extremely interested in the Hoelscher Committee's study of Army organization, and is carefully considering the recommendations of that study.

He displays an amazing amount of knowledge about the Army and its problems, and is equally at home in discussions about technology as he is in discussions about tactics.

Stahr is making a thorough study of the eternal question of how best to organize the armed forces in general and the Army in particular.

Need For Services

However—the answer, it seems to him, is not to do away with the three services.

"If we abolish the military departments we will have to have something very much like them," Stahr maintains.

"Roles and missions evolve and change, but there isn't any doubt there are three basic elements in our environment on this planet, and defense training, operation and equipment are involved with these environments.

"We need forces that are really at home in each of these major environments, and the very traditions of the services tend to give their personnel this feeling of being at home in their particular environment," Stahr points out.

"The total defense establishment is so large and so far flung geographically —as well as in other ways which have impact on the economy of the country and the lives of a very substantial number of its citizens—that the mission of the services are so numerous and complex the Defense establishment needs to be broken down into reasonably manageable parts." To Stahr, the most logical "manageable parts" are the present services.

Stahr also believes there is a real need for the service secretaries—especially when he puts on his second hat and acts as spokesman for the department.

"The services need a spokesman not in uniform to explain their needs, abilities, and capabilities, and to act as a buffer between their military commanders and political pressures."

Educated Army

In making presentations before the Secretary of Defense and the Comptroller of the budget, for example, "a civilian can sometimes be more frank and persist longer in an argument than a military man who quite rightly has a high degree of deference towards civilian authority."

Stahr also believes it beneficial that the Secretary of Defense receive advice on service problems from "those whose entire career is not tied to that service."

He is impressed with the rapidity with which reserve units have been able to become combat ready during the Berlin buildup. He predicts that the Strategic Army Reserve Forces called up "will be at STRAC status before the end of the year."

How large must the Army be? "So much attention has been focused on the Berlin crisis that we are still weighing the alternatives for the longer range," Stahr answered.

"It is clear that the threat is world wide and that our ability to respond involves two things: timeliness and adequacy . . . a quick response with a degree of force necessary is in my judgement still the most effective way of preventing major wars."

Stahr lists the "timeliness" problem, i.e. airborne and ground mobility as urgent, and expects present studies to indicate how many troops are "adequate" to meet eventualities.

Stahr is high on praise for the troops presently in uniform. He cites the fact that at the end of the fiscal year 83 percent of the enlisted men were career soldiers and that over 70 percent of officers major and above have had combat experience.

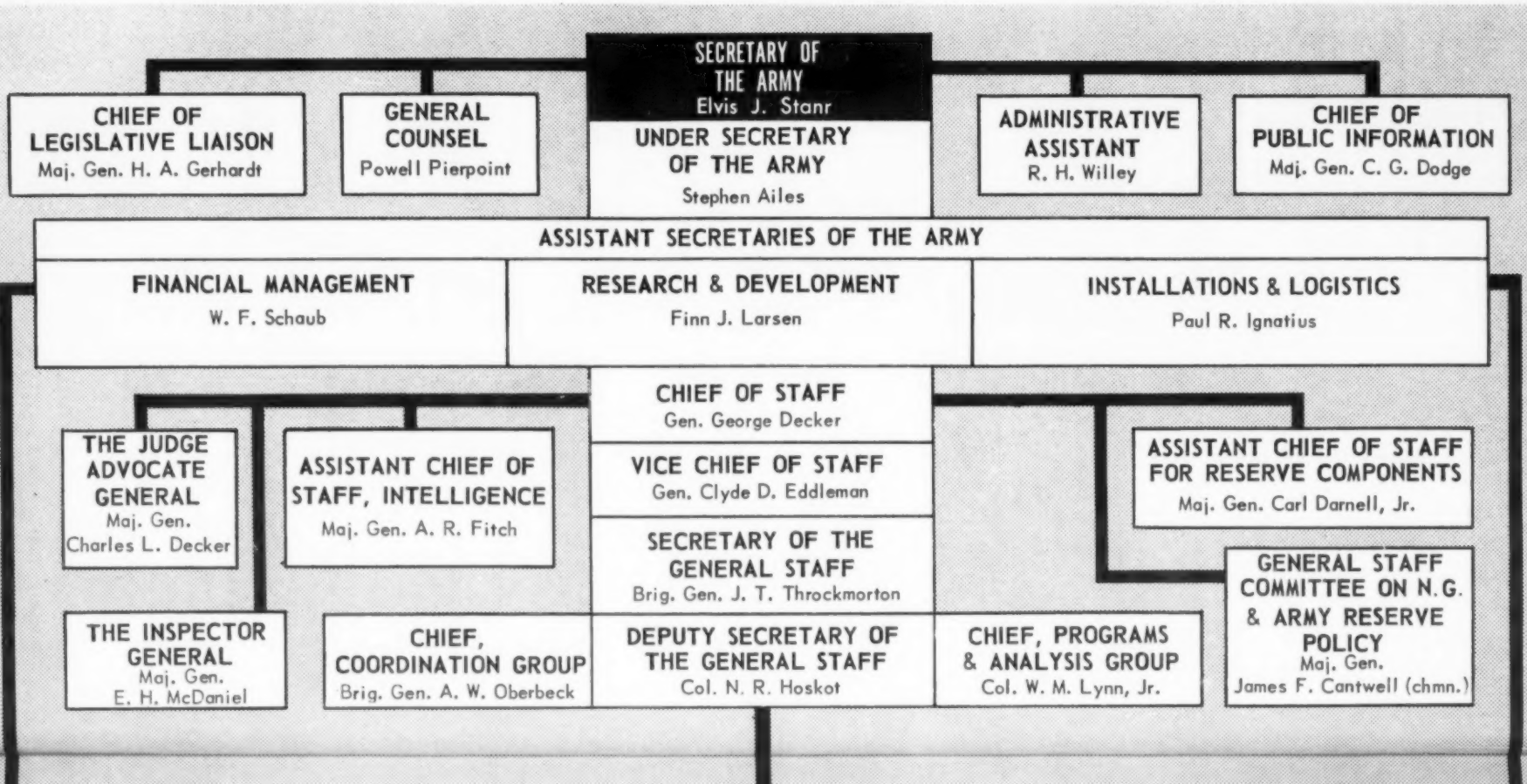
With his background as a scholar and teacher, Stahr is impressed by the fact —which he likes to cite—"one fourth of all Army officers have more than a bachelor's degree, and approximately two-thirds are college graduates."

In the new Army, the "typical officer will spend a large part of his life going to academic, command and strategy schools," Stahr predicts.

But if the Army is going to get the modern tools of warfare it needs, in-house brainpower won't be enough. The critical problems, Stahr believes, "must be handled by cooperative efforts with the best brains in the civilian field."

These efforts, he is confident, will create "an Army which lives up in every way to what the American people have a right to expect of it." ■

DEPARTMENT OF THE ARMY


SECRETARY OF THE ARMY
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CHIEF OF LEGISLATIVE LIAISON
Maj. Gen. H. A. Gerhardt
GENERAL COUNSEL
Powell Pierpoint
UNDER SECRETARY OF THE ARMY
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Gen. George Decker
VICE CHIEF OF STAFF
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SECRETARY OF THE GENERAL STAFF
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GENERAL STAFF COMMITTEE ON N.G. & ARMY RESERVE POLICY
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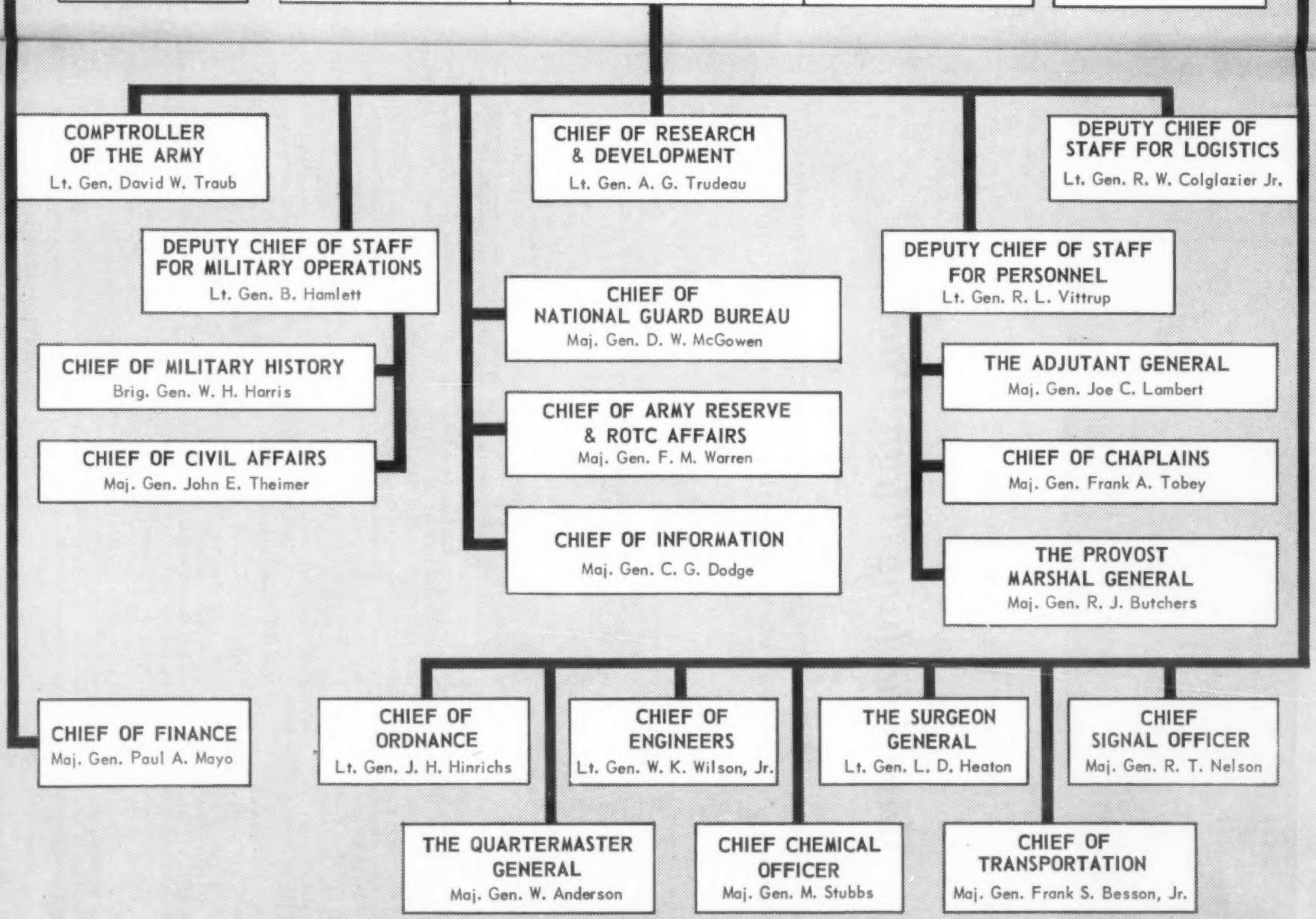
THE INSPECTOR GENERAL
Maj. Gen. E. H. McDaniel
CHIEF, COORDINATION GROUP
Brig. Gen. A. W. Oberbeck
DEPUTY SECRETARY OF THE GENERAL STAFF
Col. N. R. Hoskot
CHIEF, PROGRAMS & ANALYSIS GROUP
Col. W. M. Lynn, Jr.


COMPTROLLER OF THE ARMY
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CHIEF OF RESEARCH & DEVELOPMENT
Lt. Gen. A. G. Trudeau
DEPUTY CHIEF OF STAFF FOR LOGISTICS
Lt. Gen. R. W. Colglazier Jr.
DEPUTY CHIEF OF STAFF FOR MILITARY OPERATIONS
Lt. Gen. B. Hamlett
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Maj. Gen. D. W. McGowen
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Brig. Gen. W. H. Harris
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Maj. Gen. M. Stubbs
CHIEF OF TRANSPORTATION
Maj. Gen. Frank S. Besson, Jr.

ARMED FORCES MANAGEMENT November, 1961

". . . the range of military duty is so broad today that it has no precedent or limit . . . This means those of us who are managers have to be better . . . leaders and pushers . . . that scientists and engineers have an ever increasing burden of responsibility . . ."

***Secretary of the Air Force* Eugene M. Zuckert**

"More Catching Than Pitching"

Veteran government official and educator Eugene Zuckert believes his toughest task is to make sure problems don't pile up faster than answers can be found for them

MOVING INTO THE Pentagon as Air Force Secretary this year was, for 50-year-old Eugene M. Zuckert, a good deal like returning to college for a homecoming reunion.

A Washington lawyer since 1954, he was on the Atomic Energy commission for two years before that, held an Air Force Assistant Secretary's job (under Stuart Symington) for five years before that. Besides Symington, to whom he is personally as close as Navy's Secretary Connally is to Lyndon Johnson, Zuckert can count most current Air Force generals among his friends, was a fellow teacher (in 1940-44) with Defense Secretary McNamara at Harvard's Graduate School of Business, studied law at Yale under now-Supreme Court Justice William O. Douglas.

In sum, says one of his assistants, "Zuckert knows who to talk to when a problem comes up and has a pretty good idea where most of the bodies are buried."

Zuckert himself once described his job as "part coach and part blocking back," says his toughest task is seeing to it that the organization doesn't "do more catching than pitching." Translation: "This is a trick I learned from Symington, making sure the number of problems thrown at us is held down to only about 50% of the workflow and trying to keep the number of answers we toss out stays at about the same count. If you don't do this, pretty soon you are accumulating too many problems, and not cranking out enough answers—and this means things aren't getting done."

But seeing that he spends half his time pitching out answers is hardly Zuckert's only problem. The four-alarm-fire pace of the McNamara team, of which Zuckert is a part, has begun creating problems almost as fast as it has produced answers—which is amazingly fast.

Comments Zuckert: "He (McNamara) has somehow organized an attack on problems that have been hanging around this building for 15 years and some more besides. Many programs, such as the setting up of the Defense Supply Agency—which has the compulsion of logic behind it—have been started and started well. But they generate, for us down the line, problems of their own."

Not All 'Blue Yonder'

The total picture of what he means takes some buildup, starts with an almost philosophical look at how Zuckert thinks Defense should operate, leads from there into some specifics. Among the highlights:

"The Air Force is a $20-billion annual operation, with responsibility for managing the expenditure of nearly 25 cents out of every dollar the federal government takes in."

"But what business has such problems? How would even the best run of our industrial giants handle the cuts and surges of revenues that attend defense budgeting? Can you imagine any business subject to such rapid changes in products of such unholy cost? Do you know of any business of such diversity of product, from bulks to bombers and meat to missiles, buying everything from stockholders, each of whom has a friend on the Board of Directors from which you get your money?

"A dozen years ago, when we started talking about the future needs of the Air Force for men trained in management, many of our people thought the idea was way out in the blue. One very fine officer who later became a very fine manager said to me, "Look, I came into the Air Force to fly." Well, he was, and is, no worse off than the boy who joined the Navy to see the world from a nuclear submarine which never surfaces.

"All of which is only to say that the range of military duty is so broad today that it has no precedent and no limit. The very fact that a military establishment sends officers to such places as the George Washington University school of government, business and international affairs, is evidence enough of the change in military affairs."

"We have to talk policies, procedures, and organization, which we can

live with and which will stand up under a long haul.

"This means those of us who are managers have to be better managers than anybody has ever seen before. Procurement people have to be more progressive, more efficient, and more effective than ever before.

"The struggle means also that government administrators must be leaders and pushers; the administrative mechanisms of government must be made more responsive to the constantly changing demands of an unprecedented national effort.

"It means too that scientists and engineers will have an ever increasing burden of responsibility and pressure to conceive, to design, to develop and to produce the systems and equipment we need for freedom's defense.

"And it means that suppliers and construction people, technicians and craftsmen, inspectors and supervisors, personnel and industrial relations people, and their counterparts in the ranks of organized labor on whom so much depends, must be guided by standards of performance and accomplishment worthy of the stakes—our life in freedom.

But beyond outlining the size of the challenge, Zuckert has a lot of specific questions—and has squadrons of people hunting the answers right now. Among the question marks:

Management—"We've done things to our own Air Force organizational structure so we can get much closer to the problem at the top level. At the same time, program directors, with delegated authority and close personal contact with the contractors, have become extremely important if we are to have a chance of doing the job at all.

"We must keep in mind that you can become so well coordinated you overlook the guy stealing home on you."

Weapon Systems—"I think my greatest disappointment is that despite all we've learned, the problem of acquiring weapon systems keeps getting tougher and tougher. Partly, this is due to our jumping ahead rate in technology. But a nice share of it is due to faults in the Air Force and among contractors.

"I am particularly upset by some of the effects of the Cost Plus Fixed Fee contract. These people must get up off their tails and start to really perform. We are going to get tougher and more alert with ourselves—and with contractors, too. Industry complains about our rigidities and nit-picking, but we have gripes, too. These things have been accumulating for some time. We are going to straighten them out."

Needed: AF Scholars

People—"We have a very big problem here and, although it doesn't have much glamour in it, it's vital that we solve it. The problem, basically, is education. The range of job complexity has become so great we need post-graduate-level people. Yet, because we're still suffering a war hangover a great many of our colonels, candidates for future generalships, have only a high school education. To do a job well, we have to have top people who are professional professionals. They have to be able to talk effectively with science and technology people, establish a rapport and respect. And we have to have a capability in-house to properly evaluate what the science and industry people tell us.

"This is the reason for our recent moves to expand Wright Institute of Technology, give masters degrees at the Air University. I am disturbed by the fact that many colonels up for promotion to general rank have only high school educations.

"And even beyond that, we must answer the question of what kind of a career can we give essential people like that program director I referred to earlier? We must soften the emphasis on the generally trained officer but to do what must be done successfully we have to offer adequate incentives."

Computers—"What use is the Air Force making of these? There hasn't been adequate attention given to what to do with the machine. I have a study going now to come up with a recommended integrated approach to the use of computers."

We have to answer that question because there are so many other unanswered questions that grow out of it. For instance, what has the machine done to the management organization and techniques?

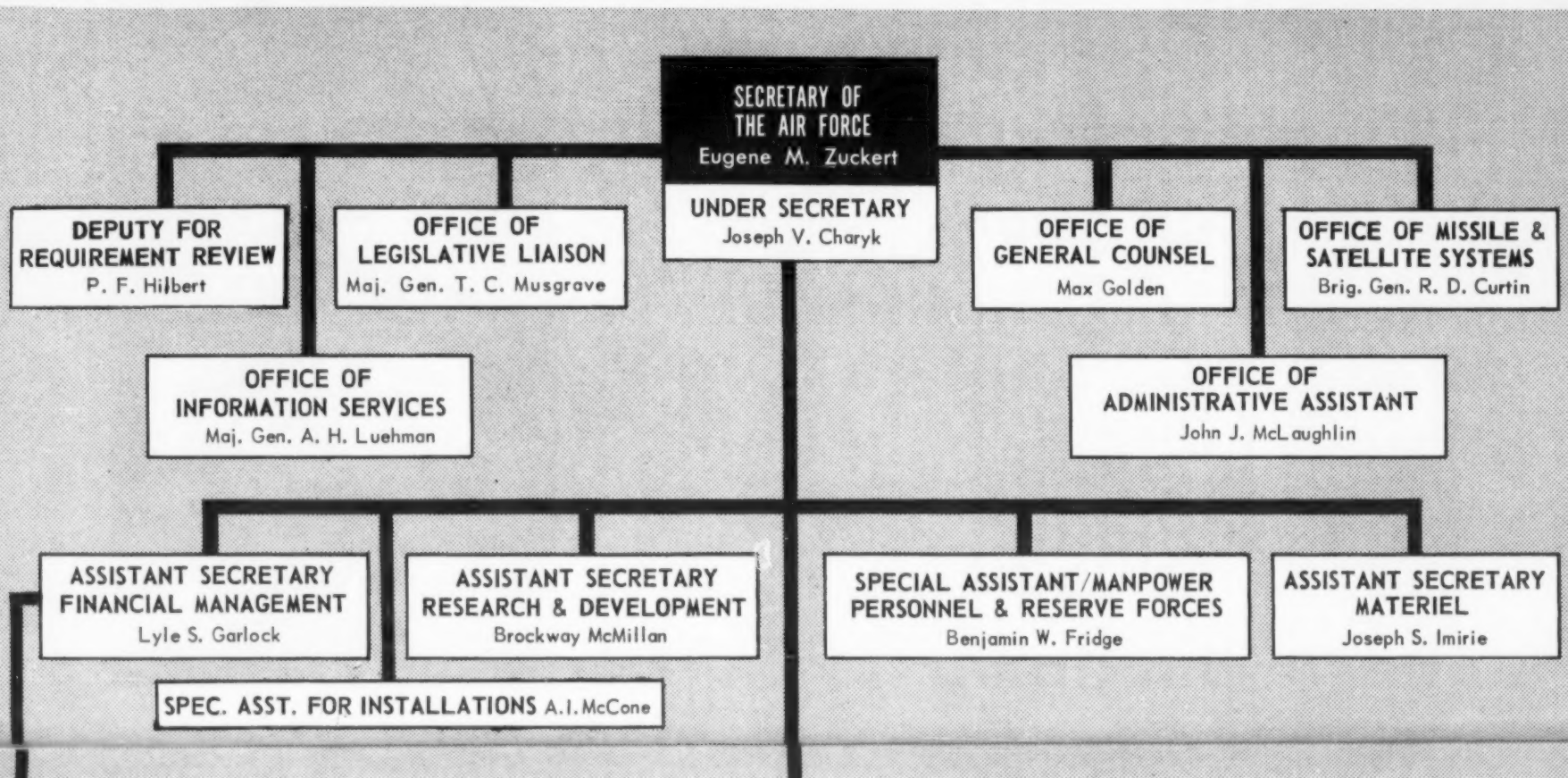
"The techniques of control can be so much different with a computer. You should be able to streamline the structure, speed up communications and analysis, but have we? Pulling together the facets of a program used to take 18 months. The computer should enable us to cut that programming cycle considerably, but has it? And, if it has, let's go one step beyond that and ask if we really need a programming shop now."

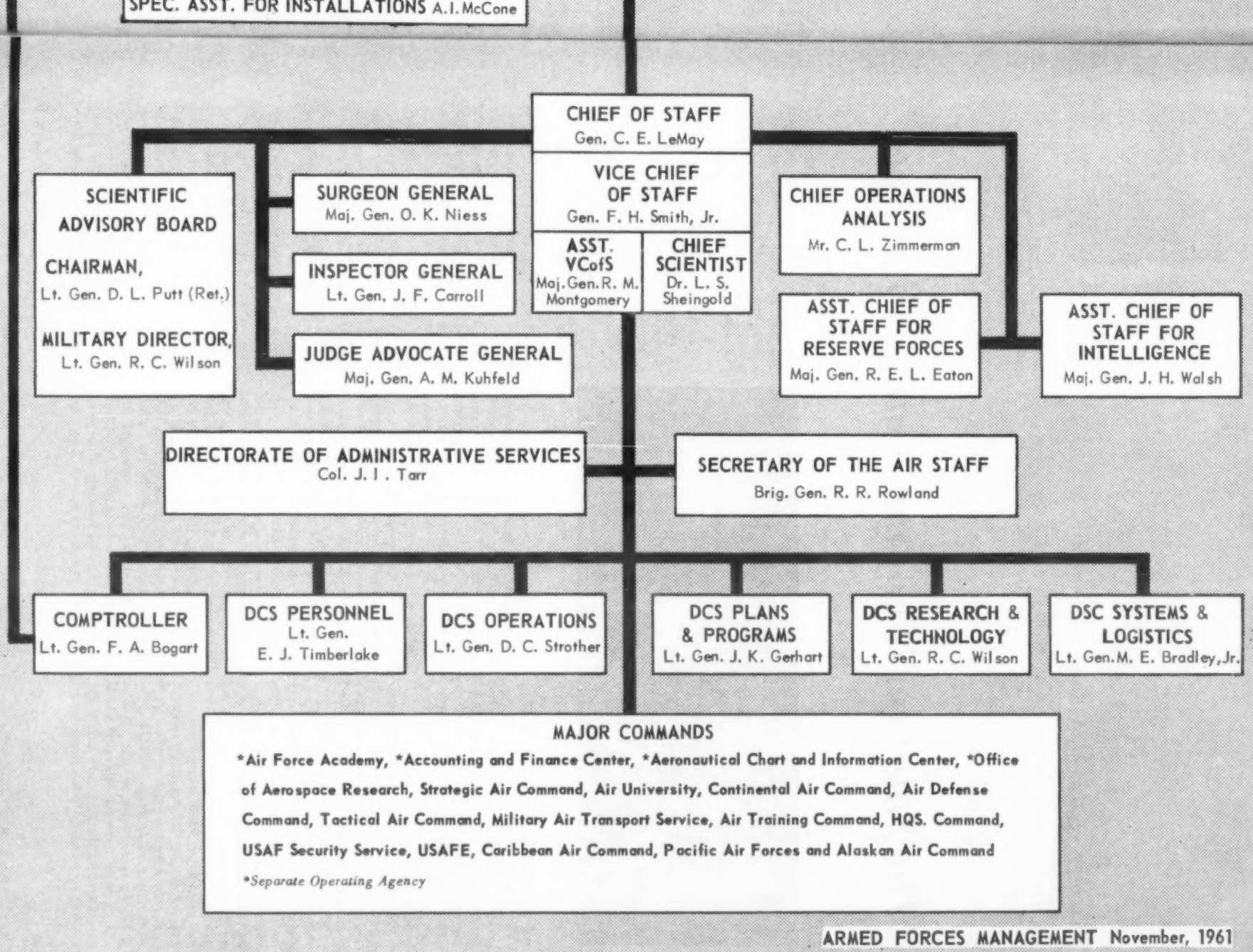
Zuckert can relate problems like these for just about as long as anyone wants to listen. And, significantly, the Air Force has listened and already started to act.

How high a goal has he set for the organization? Sums up Zuckert, from the rest of the team's point of view: "The only thing wrong with working for the government is that all that's required is perfection." ■

The B-58 and the Atlas ICBM—perfection required.

DEPARTMENT OF THE AIR FORCE




SPEC. ASST. FOR INSTALLATIONS A.I. McCone
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E. J. Timberlake
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Lt. Gen. D. C. Strother
DCS PLANS & PROGRAMS
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DCS RESEARCH & TECHNOLOGY
Lt. Gen. R. C. Wilson
DSC SYSTEMS & LOGISTICS
Lt. Gen. M. E. Bradley, Jr.
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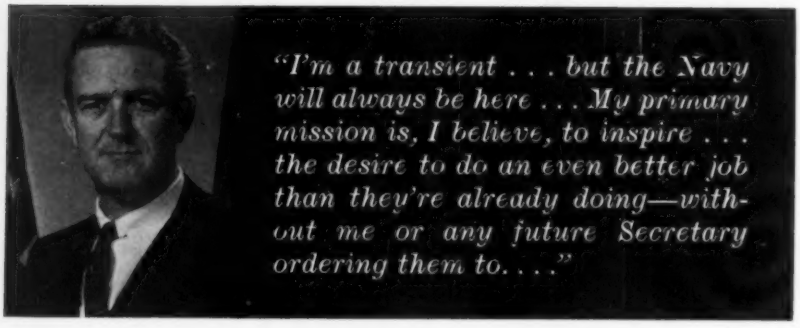
*Air Force Academy, *Accounting and Finance Center, *Aeronautical Chart and Information Center, *Office of Aerospace Research, Strategic Air Command, Air University, Continental Air Command, Air Defense Command, Tactical Air Command, Military Air Transport Service, Air Training Command, HQS. Command, USAF Security Service, USAFE, Caribbean Air Command, Pacific Air Forces and Alaskan Air Command
*Separate Operating Agency

ARMED FORCES MANAGEMENT November, 1961

***Secretary of the Navy* John B. Connally, Jr.**

"The Solution is not me issuing directives"



"I'm a transient . . . but the Navy will always be here . . . My primary mission is, I believe, to inspire . . . the desire to do an even better job than they're already doing—without me or any future Secretary ordering them to. . . ."

WHEN 44-YEAR-OLD, Texas-born John B. Connally, Jr., was appointed Secretary of the Navy last Spring, a lot of sour grapes were squeezed in Washington to the effect that President Kennedy was paying off an election debt to his Vice President, Lyndon Johnson.

He probably was. But the onerous inference gives John Connally's talents less credit than they deserve. The credentials of this tall Texas lawyer (who has also been called, "handsome, well-tailored," by at least one weekly news-magazine and more than one Pentagon secretary) included far more to recommend him than just his close personal friendship with Johnson (as a Johnson campaign aide when he first ran for Congress in 1937, administrative assistant in Washington after that, and eventually Johnson's presidential campaign manager during the 1960 Democratic nominating convention).

Among the notable details:

A civilian assistant to Navy Secretary Forrestal at the start of World War II, he resigned to become a naval officer aboard the carriers *Essex* and *Bennington* (as a fighter plane director), earned the Bronze Star and Legion of Merit. (Adm. T. L. Sprague rated Connally an "extremely outstanding officer.") He started as an ensign in 1941, left as a Lt. Commander in 1946.

Shortly after starting a law practice in Austin, he became active in dozens of business firms around the country as, first, secretary-treasurer to multi-millionaire Texas oilman Sid Richardson; later, when Richardson died, held the same job for the Richardson foundation, worth an estimated $400-million.

Hard-driving, like the rest of the McNamara team, Connally can make it pretty clear, after just a few minutes of conversation, that he is no mere puppet, that he knows what the Navy's operating problems are and what is needed to solve them.

"We have two different sets of problems," Connally told AFM, "the short range, day-by-day administrative details (examples: handling the three add-ons Navy has picked up this year, improving the readiness of fleet personnel, boosting the re-enlistment rate) and the headaches of the long haul."

It is the latter that concerns Connally most. "I'm a transient—one year if Kennedy fires me; (or possibly, as is being rumored, if he decides to run for governor of Texas) four years if I go the full tour. But the Navy will always be here. My primary mission is, I believe, to inspire in them the desire to do an even better job than they're already doing—without me or any future Secretary ordering them to."

"The solution is not for me to sit here issuing directives, but rather to serve as a focal point to broaden the vision, encourage the initiative of the rest of the organization." The Connally concepts, to catch fire, must start with the first new men coming into the Navy. Consequently, the training area is his primary concern.

An in-house scientific capability is one of his main headaches here, and, significantly, he proceeds from a basic assumption that a naval officer can't be both a topnotch scientist and a command officer. "We need both," he sums up succinctly, "not a compromise of the two specialties built into one man."

This view probably accounts for his strong request to Kennedy to give former Navy Captain Levering Smith (the Polaris technical director recognized as one of the top scientists in the country) a promotion to flag rank —after the Navy promotion board passed him over. Smith became the second Navy man in recent history (the first Hyman Rickover) to receive a special presidential promotion.

But training is not the only hurdle he sees. "We have big problems today

and probably the biggest one is to avoid becoming so hypnotized by the immediate difficulties that we stop looking into the future." To keep the Navy's eyes looking up toward the horizon, Connally sometimes has almost become a gadfly, questioning decisions in every area of Navy activity.

Among the more recent question marks he's drawn—which incidentally give some indication of the breadth of his Navy interests:

"How can we modernize without bankrupting the country and without building in a continuing demand for more people?

"Why don't we go to plastics, instead of metals, in some shipboard construction to cut costs?

"Does the Navy organization need changes (as a host of Navy people contend 'this bi-lateral monstrosity' does) to react more quickly to the needs of the fleet?

"Are we doing enough R&D work on finding out what the environment of the sea is really like, both on the surface and below?

"What steps must we take to tighten our R&D control? American ingenuity can invent far more than we can procure." (Translation, from one staff man: "We've been talking to an awful lot of people lately who have come up with a solution and are looking for a problem to solve with it.")

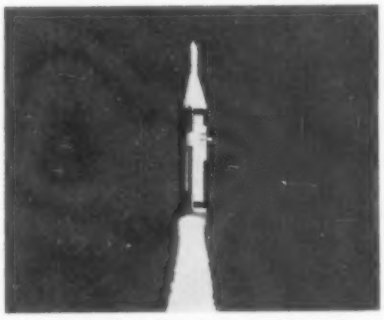
Connally is already getting a feedback that more ideas are being accepted than being thrown out, and that ideas are boiling up in increasing frequency from staff levels. To keep the fire going, Connally does such things as meet every Wednesday morning with the Bureau chiefs to look into projects in detail.

Example: on a recent procurement, he called in BuWeps personnel to find out "why do you want to award this here?" Result, Connally contends: "Navy staff work, which was always good, has improved 50%."

Naturally, this constant probing of the organization generates a lot of paperwork which, says Connally, "tends to kill all of us." To hold it down to a manageable minimum, he, like McNamara, fights the big, long, drawn out problem of decision making with a will. "I try to make these decisions quickly."

And even beyond that, he tries to see a great many people. One reason: so they'll understand his views and have the confidence to go ahead and make many key decision themselves. His summation of that effort: "Other Secretaries saw a lot of people, too, but I'll be damned if I know how they saw more than I see."

But Connally treads cautiously in checking the Navy's operation in detail. "You can't direct intelligently an organization of 1.2 million people if you become too specific." Further, he has been trying, in all his numerous talks with senior officers, to land home the point that, "I am one person. By myself, or even with the help of the entire secretariat, I am hopelessly inadequate to order changes with any chance of their holding up on the long range—without the support of the military."



Like Polaris' (above) team, Connally is counting on people.

To make sure every Navy officer got the message, he did something unique in Washington annals. Calling a meeting of all Washington area naval officers last April, he outlined the rules of his ball game in 28 typewritten pages, most of it not a demand but a request for team effort. Among the highlights:

Reason for the talk: "in so conveying my thoughts to you I know that I will be helped in the sense of a man who, in seeking a way to meet heavy responsibility, finds strength in seeking the counsel and help of those around him."

Duties: "the three months' study I have made of the threat our country faces and the means we have of coping with that threat does not qualify me as a military expert. I hope and believe that my immediate position can best be labelled as that of an unbiased person, well enough informed to make judgments, and sufficiently objective not to reject new concepts and ideas."

Change: "however secure and confident we may be in the Navy and Marine Corps capabilities and essentiality, we need not resist change simply because it is change. (Let me hasten to add we *should* resist change when it is simply for the sake of change.) When wisdom dictates change, we must anticipate it; seek it; plan it; guide it; urge it; use it to increase our capabilities. The Navy has always responded to challenge; the challenge of change is unending.

"Ideas and initiative are vital. Ideas cause the forward movement we want in the Navy and Marine Corps. I call upon each of you to exercise your initiative, to move your ideas out into the open with boldness and courage. They are important."

Re-examination: "I call not for radical departure from time-tested traditions and procedures—but a vigorous soul-searching."

"During each day that passes we must stand back and objectively view our own efforts, our work, our programs, and our plans.

"We must ever remain receptive to ideas and suggestions that will help us carry out our responsibilities with the utmost effectiveness.

"We must ever test our own objectivity.

"No one man has the total professional wisdom to judge precisely our course and speed. But each of us can help through our own personal, total dedication—by a new and bold examination of Navy-Marine Corps problems against total national defense problems."

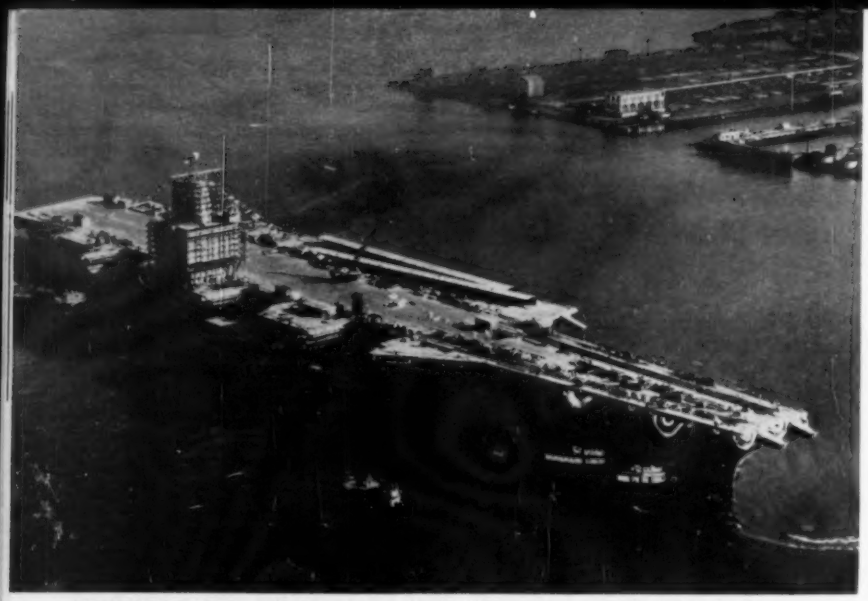
Importance of sea power: "I see no substitute for sea power—one generation—or a dozen from now.

"America today is a maritime nation, dependent upon the seas for existence and protection. Maritime power, applied at the right time, in the right place, and with the right amount of force is vital—just as it alway has been since time began. We ignore this lesson of history at our own peril."

Personal challenge: "People are the key to our success.

"I will tell them that you are devoting your lives to the preservation of our homes and to the future of our children and this nation."

Leadership: "this brings me to Gen-



Underlining Seapower's importance is the Enterprise currently being built.

eral Order Number 21 on Naval Leadership. This General Order was not intended as a panacea for leadership deficiencies. It must be used as a guide —as a constant reminder that we must concern ourselves every moment of every day with leadership.

"No one could possibly set down in writing all of those many facets of individual judgment and character that go into the make-up of a good leader. Leadership is not something that you can compute by modern scientific methods. It is something that you and I must feel—must be aware of and must practice—sometimes without any guidance whatsoever.

"We cannot expect our men and women to be motivated without a basic knowledge of the need of the contribution they are making. They must be informed to the point of realization that their service is not the traditional peace time service. We are obligated in these days of cold war to let them know the depth and breadth of the contribution they are making to our country and the peace of the world."

Recognition: "in the cold war, the junior officer or petty officer who gives his job more than is required, and in the process makes an important and lasting contribution, is entitled to recognition more tangible and less private than that made possible by use of the fitness report.

"In order to stimulate and encourage the pursuit of excellence and improvement in the less glamorous fields of operations, administration and management, I intend to establish an award system for recognizing junior officers and enlisted men who excel or make major contributions."

Specialization: "the increasing complexity of our Navy requires increasing specialization. We must look into the possibility of slowing down the rotation in order to guard against transferring our officers and men at about the time they become really proficient in a particular job. We cannot afford rotation merely for the sake of career pattern.

"Could we not make changes in our selection and detailing systems to permit earlier determination of an officer's ability to command, possibly at the level of commander or very junior captain, and thereafter be able to use officers in billets of great importance for longer periods of time?

"Should we not . . ."

"In an age of technology, should we not place more emphasis on engineering duty officers? Should we not take steps to even further increase the vitality of this group—particularly in the junior ranks? And should we not have greater communications between the line officers and the technical officers? Should there not be more line officers in the Bureaus and more technical officers in the offices that deal with requirements and planning.

"Why can we not set up a system which will clearly fix responsibility for design, procurement and production within our Bureaus and keep personnel in specific programs long enough for them to achieve credit or bear the blame for their work and decisions?"

Officer training: "in our officer training of these times:

"Should there not be more emphasis on international affairs and National motivations, including the actions and reactions of Nations to the ebb and flow of world events?

"Should not everyone of our officers speak at least one foreign language?

"Should not we better stress the economics of government? Do we train our officers to view our needs in the light of our overall economy and to try to evaluate a naval requirement in terms of our nation's overall ability to provide and sustain it?

"Should we not, in the light of the rapid technological changes, provide better means for our officers to stay on top of their areas of special knowledge through intensive periodic courses of short duration in our own service schools or in universities throughout the country?"

Shipbuilding & Modernization: "I am particularly interested in the modernization of the Fleet, which leads directly to our shipbuilding and aircraft procurement programs. It is obvious that we cannot go on hoping that someone is going to wave a magic fiscal wand to modernize our aging Fleet.

"If we continue to build ships that last 20 years at the rate of 20 or so a year as we have been in the past, we can see the day when we will have a Navy of half the number of ships we have now. This must not be. We must find ways to build ships more cheaply, while at the same time expressing our needs more clearly.

"Perhaps the answer lies in less sophisticated ships—or more ships of exactly similar design. I am not at all convinced we have to hand tailor every ship that comes off the ways. We cannot hope to embody in each ship and aircraft all of the improvements that our technical laboratories can dream up. If we did so, a ship would never go to sea, because our technical progress is never-ending.

"Too many of our modern ships have cost too much, have been late in delivery, and are severely restricted in performing their missions because of the premature incorporation of hoped-for advances in technology and frequent changes made to their specifications."

Aircraft Procurement: "In the same vein, I am interested in reversing the trend of a declining and aging inventory of aircraft by at least procuring aircraft in excess of anticipated losses. Our aircraft development plans and our aircraft shopping lists need similar searching examinations."

Surface Weapons: "We need to examine surface weapons in the light of our future roles and missions. Should we re-emphasize our amphibious and limited war capabilities and the kinds of surface weapons which best support them, even at the expense of our ability to press carrier borne air attack against strategic targets? As strategic missiles come in, does anything else go out?"

Anti-Submarine Warfare: "What

greater emphasis can we place on our ASW effort? What proportion of our effort must we place on surveillance systems? What better use can we make of our present equipment? Can we find cheaper ways of obtaining the same promising results we are now getting from our newer but heavy and very expensive equipment?

"All of these problems have been carefully studied by our present ASW organization from the ASW Committee on down—but sometimes fresh, young brains come up with something new, simple and unapparent."

"This is a fertile field—and one where the pay-off means much to our nation's safety."

Organization: "In your devotion to your job I have noticed that some of you sometimes lose sight of the problems and capabilities of other elements of the Navy. For this reason I feel it is important that no artificial organizational barriers exist to promote this compartmentation. Therefore, I intend to take a close look at previous Board reports and when justified, make organizational changes. For instance:

"Do we need . . ."

"Do we need an Aircraft and Missile Characteristics Board to parallel the action of the Ships' Characteristics Board? Or should we abolish the Ships' Characteristics Board and go about both problems entirely differently?

"Should we put greater emphasis on test and evaluation by creating a board to specifically advise the Chief of Naval Operations and myself when a system will be ready to be placed in a ship or aircraft?

"Why should not the Inspector General have authority within the Military Sea Transportation Service and within the material Bureaus?"

Questions: "During the next several months I intend to pose to the responsible officers a number of questions. Many of these I have touched on already. In asking these questions you can be assured that my motivation is not criticism, but rather an honest desire to make sure that we do not overlook any avenue that may promise greater progress in fulfilling our missions.

"These examinations—the answers to these questions—may often reveal we are doing the best we can. But in responding to these questions, if there is, through your own abilities, opened up but one more avenue for progress, I shall feel that my work has not been in vain. Likewise, if we can block off even one thing that is sapping our strength and effectiveness, we shall have done something worthwhile." ■

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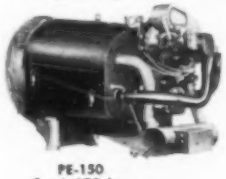
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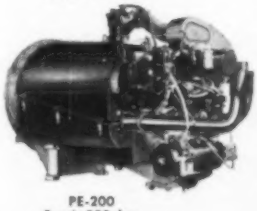
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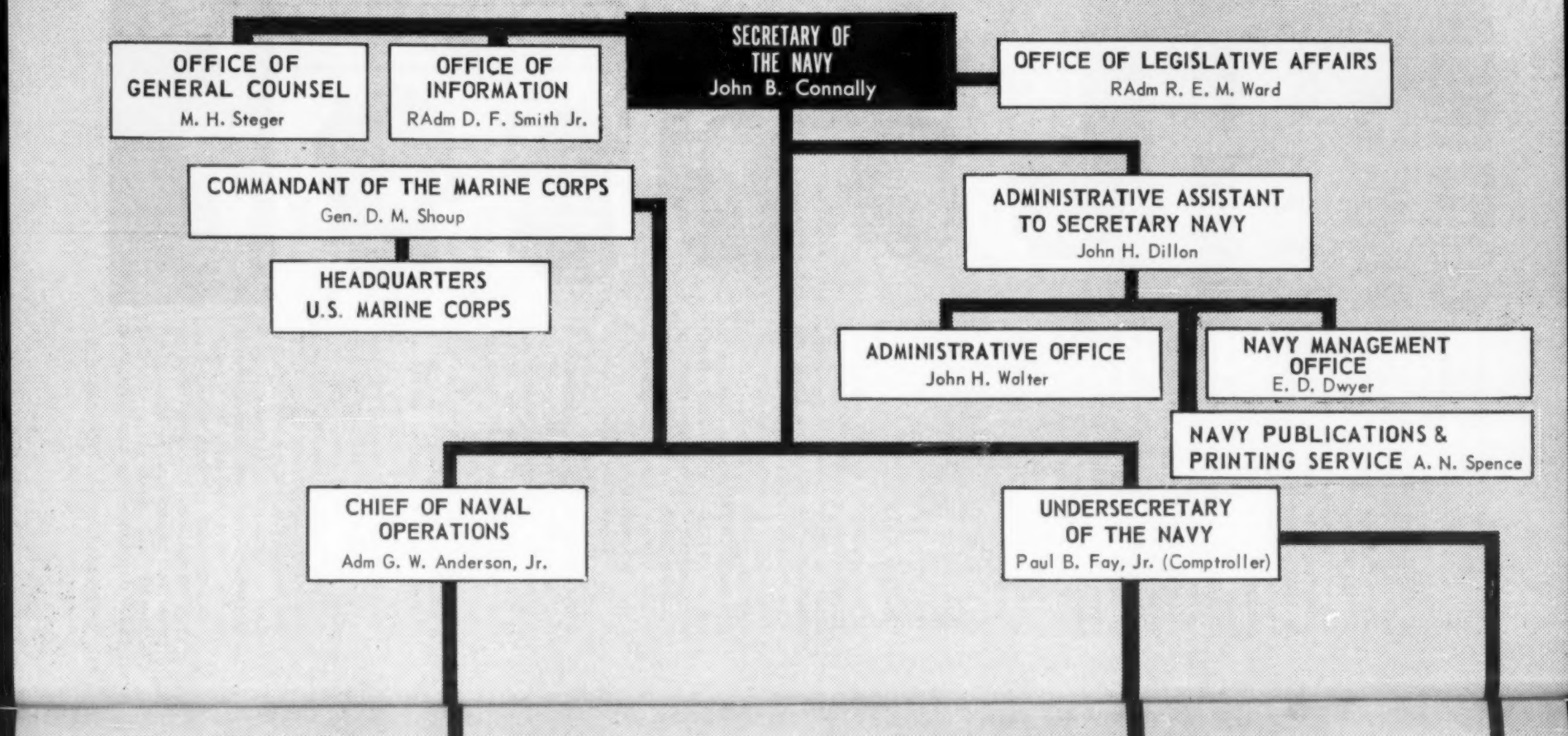
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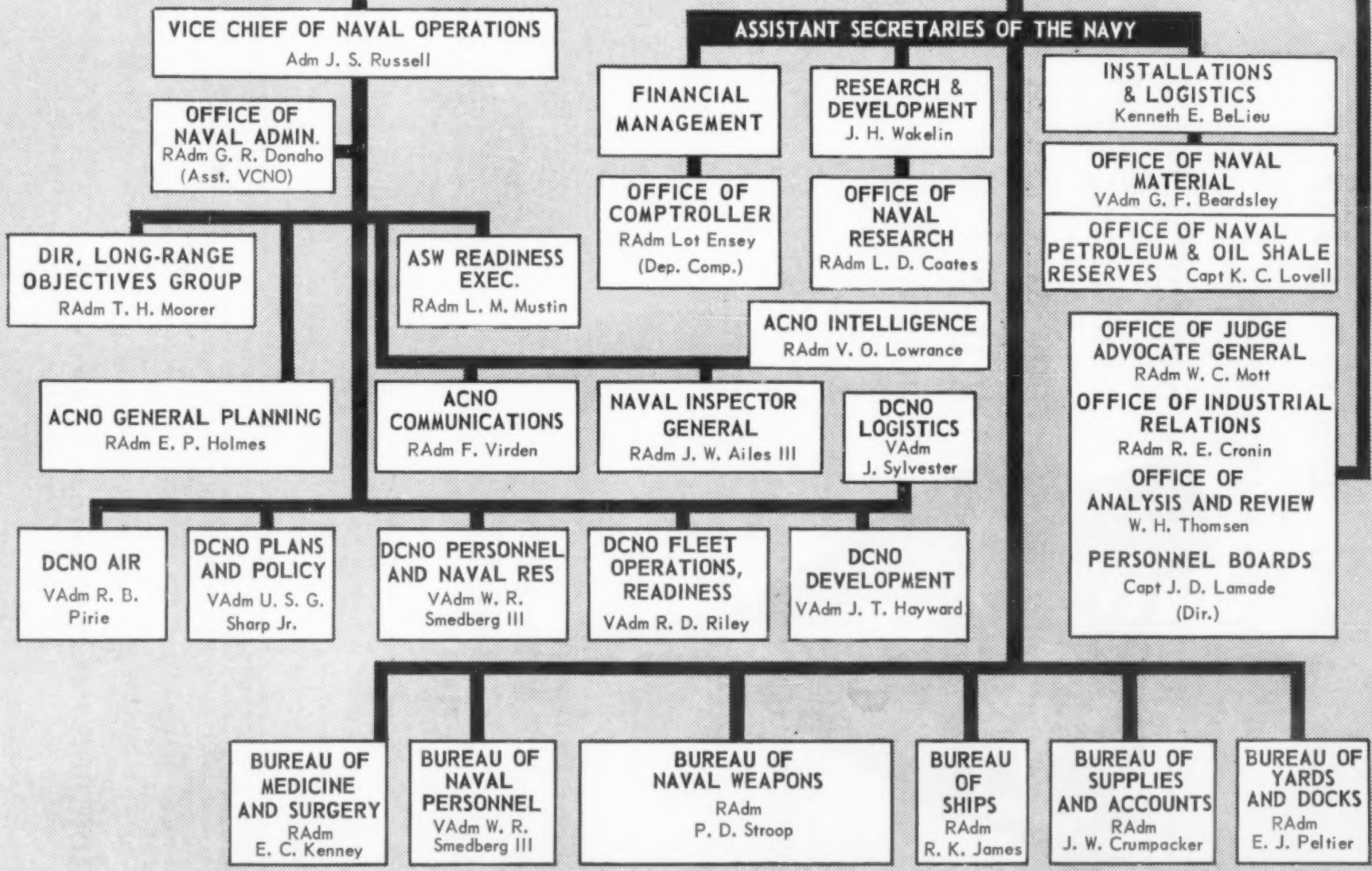

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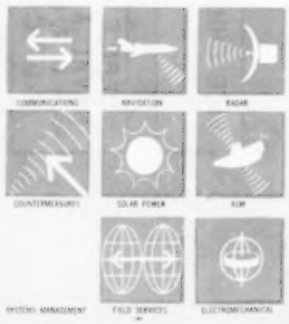

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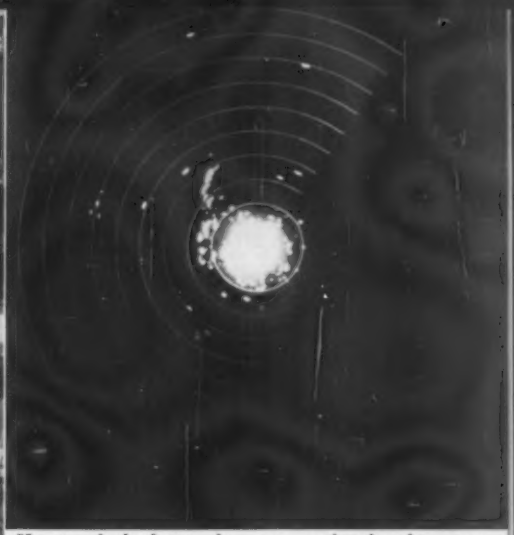
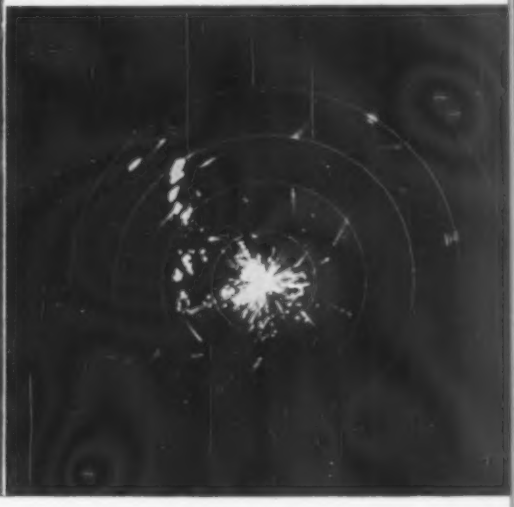


Unretouched photos show conventional radar scope with single target display (above) and Raytheon bright display with continuous target tracking (below).



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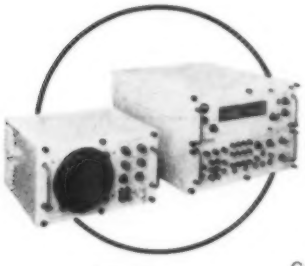

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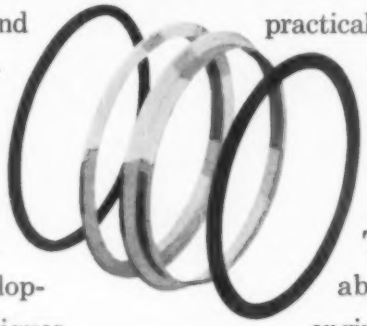

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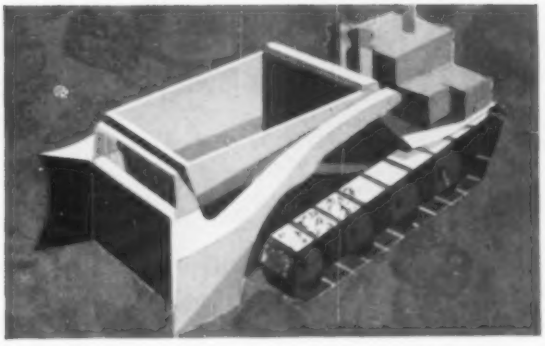

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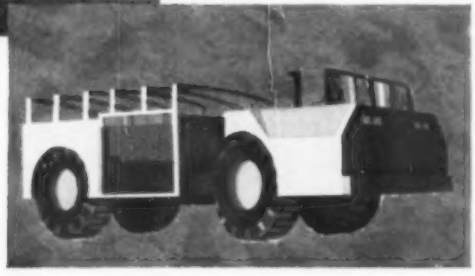

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General Counsel

Cyrus R. Vance

Besides their legal duties, the office has a new job: recommending Pentagon organizational changes. Reason: in an outfit famous for tinkering with the setup, no "official" study group existed before.

Where Reorganization Ideas are Born

THE LITTLE KNOWN, almost unpublicized command post for Secretary McNamara's moves to organize a more effective, efficient Defense establishment is the office of the General Counsel, Cyrus Roberts Vance.

Added to Vance's regular duties as the Pentagon's top legal officer was the job of looking at Pentagon organization and making recommendations to improve it. Out of this office has come the research and proposals that have affected many of the dramatic changes in Pentagon landscape during the past nine months.

When McNamara assumed office he asked to meet the men from the office that reviewed Pentagon organization. He was, in his own words, shocked to find that no such office existed. Issued almost immediately (Jan. 30) was DOD Directive No. 5145.3, assigning responsibility for management and organizational planning within the Department to the General Counsel.

Nine months later, after reviewing the staff work of the Office of Organizational and Management Planning his directive set up, McNamara told AFM's editors he thought this was "one of the most important decisions," and added, "they have done a tremendous job."

When Vance set out to fulfill his new responsibility, he learned that while no such office dealing with the science of management reorganization had previously existed, men who knew something about it did. Three junior officers, who had worked on planning organizational and management studies within their respective services, were selected for the new office. Appointed as the chief management and reorganization planner was Solis Horwitz, whose extensive experience (as lawyer, investigator and administrator) included service as General Counsel for the Reconstruction Finance Corporation, the Senate Preparedness Committee, and the House Armed Services Committee.

Vance, Horwitz and their three junior partners (Navy Commander David O. Cooke, Army Lt. Col. John H. Cushman, and Air Force Major Abbott C. Greenleaf) had little time to consider their task before requests came flowing in. McNamara had already reviewed the Pentagon's organization structure and wanted to know whether this or that office was really needed, whether certain offices couldn't be united, whether certain functions couldn't be more effectively handled under one of the Services, or under a combined command, or in a new agency—and he wanted this information as soon as possible.

Wants Alternatives

McNamara didn't want answers. He wanted extensive research and alternative proposals he could review in order to make knowledgeable decisions.

The job of the Office of Organizational and Management Planning, then, was to pick the brains of every knowledgeable person in the field under study, find out whether the present organizational structure was adequate, and if not, to present to McNamara all of the alternatives that would improve the organizational structure—along with the supporting facts.

Part of the job of Vance's management team is to initiate recommendations on reorganization, but the General Counsel frankly admits that requests from McNamara have been so heavy they haven't had time to initiate many proposals on their own.

In the crowded, unpretentious office occupied by Horwitz, (the last wall safe had to be squeezed in behind the door leading to the John), the Office of Organizational and Management Planning's staff settled down to the McNamara 16-hour-a-day, 80-hour work week around a rectangular table. The number of known unclassified projects that have left that table in the next nine months and adopted in at least some form has been prolific. They include:

- Combining the Offices of the Assistant Secretaries of Defense for Manpower, Personnel, and Reserve, and for Health and Medical, into an Office of the Assistant Secretary of Defense, Manpower.
- Combining the Offices of the Assistant Secretaries of Defense for Supply and Logistics, and for Properties and Installations, into an Office of an Assistant Secretary of Defense for Installations and Logistics.
- Preparation of studies incident to the transfer of major civil defense functions to DOD.
- Designation of the Air Force with responsibility for DOD's space research and development program.
- Reassignment of responsibilities for geodesy, mapping and charting to specific DOD components.
- Establishment of the Defense Supply Agency. (Vance was chairman of

the Project 100 committee which made this recommendation.)

• Establishment of the Defense Intelligence Agency.

Changes in the Pentagon organization structure initiated elsewhere but reviewed by the Office of Organizational and Management Planning include:

• Correlation of every principal OSD staff office so that common nomenclature was used to designate comparable positions (such as establishing an Assistant Secretary of Defense under the Director of Research and Engineering).

• Establishment of an Office of Programming under the Assistant Secretary of Defense, Comptroller.

• Expansion of the functions of the Policy Planning Staff under the Assistant Secretary of Defense, International Security Affairs.

• Establishment of the Office of Education and Manpower Resources headed up by a Deputy Assistant Secretary under the Assistant Secretary of Defense, Manpower.

• Review of all DOD committees and boards which so far has eliminated 424 committees and scheduled 129 more for de-activation.

• Realignment of the functions of military departmental Under and Assistant Secretaries so that they are parallel.

• Reorganization establishing the Air Force Systems Command, Logistics Command, and the attendant realignment of functions in the Air Staff.

• Reorganization of the Army and Air Force missile site activation units.

• Establishment of the Requirements Division in the Directorate of Plans and Policy (J-5) of the Joint Staff.

Unclassified projects currently under review include:

• An investigation of the functions of the Defense Communciations Agency after its first year of operation.

• An investigation of Army organization, including the Army General Staff, the field organization, and the Technical Services (currently being conducted by the Army's Hoelscher Committee).

• An investigation of the management and organization of "services" common to more than one military services, such as criminal and security investigation, recruiting, special training, and automatic data processing.

The office also conducts a continuing review of long range reorganization, such as outlined in the Symington and other sweeping reorganization proposals.

How do five men go about framing proposals calling for the reorganization of departments having to do with such complex matters as research, development, logistics, military strategy, etc., especially when none of them can claim to be experts in any of these fields?

The answer is that similarity exists in the way many of the varied fields can be organized for maximum effectiveness.

When the Secretary of Defense asks the Office of Organizational and Management Planning to check into current organization of Defense communications, supply, research, space programs, etc., their first job is to gather facts.

Alternatives Wanted

If the present organization of a certain area of interest spreads across the four services, the first step followed is to go to the services and get their opinion. Vance's charter allows Horwitz & Co. to call for the assistance of any expert anywhere in the Defense establishment whose advice may be valuable. They can ask the services to conduct investigations and make recommendations.

After receiving the opinion of the services, the affected military components, and those who have special knowledge in the field, the office prepares a report for McNamara which summarizes the evidence obtained, defines the problem, outlines the alternatives, and makes recommendations in the form of a draft memorandum or directive.

Once McNamara receives the preliminary report, he may make suggestions or ask for new information not covered. At the same time the report is given to other top DOD officials and the Secretary of Defense goes over their responses.

The General Counsel's Office then prepares a second report incorporating the suggestions from above.

The men in charge of reorganization planning say that they have had little balkiness and usually willing cooperation on the part of the services, even though some of the proposals may take away functions, and specific organization from one service and give them to another, or combine them under a joint organization at the OSD level or under the JCS.

An example of the smoothness of the operation, according to Vance, was the Project 100 report setting up the Defense Supply Agency.

McNamara suggested that the Project Committee come up with three alternative proposals. The Committee then asked the three services to come up with analyses on each of the three plans.

The coordination with the services was so effective at the time the three proposals were drawn up, Vance reports, that they knew about them in detail prior to the time they were submitted for recommendation.

Because of the number of reorganization studies being conducted by the office at any one time, the preliminary work (obtaining the service viewpoints, levying experts in the given field to do studies, etc.), is done by one of Horwitz's three assistants. When the information is collected and the report to McNamara is ready to begin, Vance, Horwitz, and the staff assistant who compiled the preliminary research, and the other two staff members get into the act around Horwitz' rectangular table. From this joint effort comes the preliminary and secondary report.

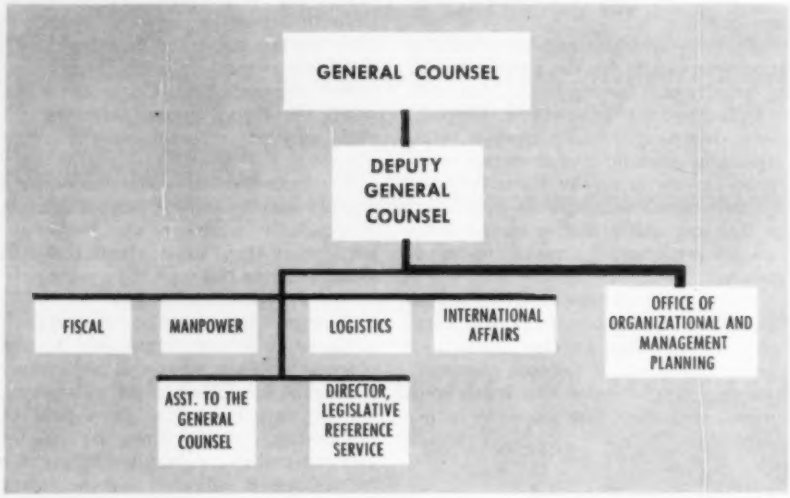
Previous General Counsels had enough to keep them busy just being the chief legal officers of the Department of Defense. Not only must the General Counsel advise the Secretary and the Defense establishment on a wide scope of legal problems, including international law, commercial problems and the function and structure of government including executive-legislative relationship, but he is also responsible for the surveillance of security matters within the department, the investigation of unauthorized disclosure of classified information, and the procurement of the legislative program.

Experience Best Teacher

Vance spends about 50 percent of his time with the new Office of Organizational and Management Planning. He attributes his ability to do this to the support he receives from his Deputy General Counsel, Leonard Niederlehner, a career government lawyer who has been in his present position since 1953.

When McNamara said he was shocked to find that previous Secretaries of Defense did not have personal advisors on management and organization permanently assigned to them, he was expressing surprise that the largest single business in the world did not have what most large private corpora-

DOD's Management Office To Reap Future Dividends



tions have had for some time.

The new organization, which will be here to benefit future Secretaries of Defense after McNamara's departure, should improve its procedure and effectiveness because of the pioneering efforts of the original staff.

Horwitz says he was "amazed to find how the many varied types of military organizational problems down into common patterns under systematic analyses."

Office members say that later attempts to collect information and formulate proposals for management improvements were easier because of what was learned on the earlier attempts.

As one member of the staff said: "after working out one reorganization proposal and roughing out the problems connected with the process of how to do this, the next attempt is easier because the process falls into approximately the same pattern you have just learned."

The Office of Organizational and Management Planning has not forgotten that the Directive establishing them gives them the authority to initiate proposals on their own. They only hope that some day Secretary of Defense McNamara and Deputy Secretary of Defense Gilpatric will run out of ideas, or at least slow down the number of ideas for any given period so that they can try it.

Breakdown

General Counsel

Is the chief legal officer of DOD, giving legal advice to the Secretary and Deputy Secretary of Defense and to the Chairman, Joint Chiefs of Staff. His office is concerned with long and short-range management and organizational planning within DOD; surveillance over DOD personnel security programs; review of inspection programs of DOD to assure that prompt and proper action is taken on any fraudulent or improper practice by DOD officers or employees; assurance of, when appropriate, the conduct of prompt investigations of unauthorized disclosures of classified information; and development of DOD legislative program and development of coordinated DOD position on legislation, Executive Orders and Proclamations.

The General Counsel serves directly: Assistant Secretary of Defense (Public Affairs) and Assistants to the Secretary of Defense (Legislative Affairs) and (Special Operations).

Fiscal

This office is staffed with four professional and two clerical civilians, and serves the Assistant Secretary of Defense (Comptroller) on matters pertaining to the over-all DOD budget.

Manpower

Serves the Assistant Secretary of Defense (Manpower) and is staffed with six professional and four clerical civilians.

Logistics

Serves the Director of Defense Research and Engineering, Assistant Secretary of Defense (Installations and Logistics), Assistant to the Secretary of Defense (Atomic Energy) and the Director, Advanced Research Projects Agency. It is staffed with six professional civilians and four clerical.

International Affairs

This office serves the Assistant Secretary of Defense (Internationl Security Affairs) and has six professional civilians, two professional military men, with five clerical civilians.

Assistant to the General Counsel

Serves Reserve Forces Policy Board and the Director, Office of Administrative Service, is staffed with two civilians; one professional and one clerical.

The offices mentioned above have basically these functions: advise with respect to the legal and related policy implications of DOD activities and plans; interpretations and preparation, or assistance in the preparation, of legislation, Executive Orders, regulations and policy directives required for or related to DOD programs; legal advice with respect to the implementation of laws, Executive Orders and policy directives; DOD legal and related policy positions on matters requiring consultation with or action by other governmental, non-governmental and, where applicable, international organizations, and in connection with Congressional hearings and investigations.

Organizational and Management Planning

Conducts research to provide timely and effective solutions to DOD management and organizational planning problems; develops long and short-range plans for managing and organizing the DOD in order to provide progressive and effective improvement in the accomplishment of assigned functions and duties; develops improved management practices within DOD to achieve more efficient, economical operation and eliminate unnecessary overlap or duplication of efforts. Also, gives presentations on organization and management problems for: DOD, Congress, and the Executive Office of the President.

Director, Legislative Reference Service

Handles assignment of action on DOD legislative program; assignment of action for preparation of coordinated DOD position on legislative items, Executive Orders and Presidential Proclamations; legislative and Congressional document reference and distribution point; as well as maintaining historical legislative files. ■

Science Serves Defense at Westinghouse

The new underwater acoustic test laboratory pictured below will be in operation this year in Baltimore, helping Westinghouse engineers solve problems in oceanographic and ASW research.

Built by the Westinghouse Ordnance Department, the new laboratory is one of the largest and best-equipped privately-owned facilities of its kind. It is 205 feet long and 175 feet wide. The air-conditioned instrument house floats on a 3½ million gallon lake, 25 feet deep and with an anechoic lining.

The laboratory will advance the development of a wide range of Westinghouse underwater acoustic equipment. Included are transducers, detection systems, weapon homing and guidance systems, and high and low frequency sonar devices.

Underwater acoustic systems built by Westinghouse are a part of various Navy weapon systems. This new acoustic laboratory at Baltimore will bring continued contributions to this vital area of American strength.

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International Security Affairs

Paul H. Nitze

Sometimes labelled the Pentagon's unofficial State Department, ISA is playing today an increasingly important role in McNamara's operation, now does, with impact, far more than "just run the MAP."

ISA: Pipeline on Foreign Affairs

WHEN EX-PRESIDENT Theodore Roosevelt reviewed Kaiser Wilhelm's German legions in the first decade of this century, he realized this mighty force had not been organized merely for parade purposes, and asked the Kaiser what he intended to do with them. Roosevelt and the world got their answer in 1914 with the beginning of World War I.

As we emerged as a world power, it became increasingly clear to us that the objectives of possible aggressors must be known before an adequate military force can be planned and organized.

Mounting Soviet pressure after World War II led the U.S. to reorganize governmental departments involved with national security so that greater coordination could be effected between military planners and foreign policy experts as to what type of military force could best protect the nation and carry out its international objectives. Two results of that reorganization were the establishment of the National Security Council and the Office of the Assistant Secretary of Defense for International Security Affairs.

Under the direction of Paul H. Nitze, ISA is playing an increasingly important role in McNamara's Pentagon, one indication of which is the scheduled addition of a significant number of super-grade positions to its Policy Planning Staff.

As ISA chief Nitze wears two hats: one as the chief foreign policy advisor to Secretary of Defense charged with "developing and coordinating defense positions, policies, plans, and procedures in the fields of international political-military and foreign economic affairs . . ."; and the other as administrator of this country's billion dollar plus Military Assistance Program (MAP).

Though both roles are important, the big change has been the emergence of ISA in the area of military planning.

For years after the establishment of ISA many experts felt that its policy function was unnecessary.

Differences Exist

The Senate Committee on Government Operations pointed out in a Staff Memorandum in 1959 that "differences of viewpoint exist over the proper place of ISA in the policy process. Some argue that it duplicates functions of the Department of State and unnecessarily layers relations between State and the Joint Chiefs of Staff. Those of this view would encourage more direct relationships between State and the Joint Chiefs. On the other hand, it is held important that the Secretary of Defense have access to counsel in these problem areas from some source other than the armed services themselves."

McNamara decided he needed access to such counsel within DOD, and has stressed the importance of ISA's policy planning role more than any previous Secretary of Defense.

The Secretary is also pleased with the initial results of this planning, which, among other changes, resulted in the greater emphasis being placed on conventional and guerrilla warfare capability.

In fact, the thorniest problem McNamara and his assistants feel they face, as expressed by Deputy Secretary of Defense Roswell Gilpatric in this issue, is the translation of national policy into military plans. The McNamara answer is to increase the planning staff of ISA, have them work more closely with the Joint Staff, and achieve greater coordination between both groups and the budget experts.

The Senate report previously referred to also recommended that "the planning process . . . would be improved by enlisting the talents of officials experienced in a wider variety of fields than is now the case . . ."

Paul H. Nitze as head of ISA was just what the report ordered. An acknowledged expert on international affairs, Nitze has served both in the Department of Defense and the Department of State, knows both the military and diplomatic viewpoint, and how to coordinate them.

During the Truman Administration, Nitze was a key assistant to Secretary of State Dean Acheson, was instrumental in shaping the Marshal Plan, and eventually was director of the State's Policy Planning Staff. A campaign advisor to President Kennedy, he headed a grouup which handed to the President-elect a position paper on foreign policy the day after the election. President Eisenhower nominated Nitze, a Republican for his

present post, but had to withdraw the nomination because of the objection of certain Republican Senators. Nitze is being thrown into the limelight as a policy spokesman with greater frequency. He was used in September to enunciate the Administration's hardline on Berlin.

Besides his role as foreign policy advisor to McNamara and as MAP administrator, Nitze monitors Department of Defense participation in National Security Council affairs, including the development, coordination of and the provision of staff support for McNamara on the Council and initiation of actions implementing NSC policies within DOD.

Because of McNamara's respect for his ability and his long association with Secretary of State Dean Rusk, Nitze is an effective liaison between Defense and State.

Just as sound military planning cannot be conducted without political and international considerations, so other areas of national security conducted by agencies outside of DOD need to be apprised of military considerations. It is Nitze's job to coordinate with these organizations and to assure that their policies are compatible to basic military objectives.

Serving under Nitze is Deputy Assistant Secretary (Arms Control) Lt. Gen. John A. Dabney. His job is to apprise and coordinate with the newly appointed Director of the U.S. Arms Control and Disarmament Agency, William C. Foster, (who reports to the Secretary of State and the President) to assure that his organization has accurate information as to the military considerations of any disarmament proposal.

Nitze and his assistants are also the focal point for coordination on the military aspects of United Nations affairs, foreign economic and trade policies, agreements for exchange of atomic information, and in other areas where there is a distinct military interest.

Heart of ISA's advice-giving function are the Regional Directorates under Deputy Assistant Secretary of ISA for Regional Affairs Hayden Williams.

Here politico-military experts keep a thumb on everything occurring throughout the world, evaluating developments of a politico-military economic nature in order to anticipate emergent problems affecting DOD.

They coordinate with the JCS, the unified commands, the military departments and other Defense agencies concerting the region or country they are in charge of, and formulate recommendations for the Secretary of Defense via Nitze, coordinate and possibly recommend revisions of or review recommendations made by JCS.

Policy Staff Stressed

The Regional Directorates also represent DOD in staff consultations with State, the International Cooperation Administration, other governmental agencies, and Congress on the military aspects of events in their designated areas of the world.

They also advise Military Assistance Director Gen. W. B. Palmer about the politico-military significance of proposed MAP action. Their advice could determine, for example, whether it would be in the national interest to give the leader of some small nation jet fighters.

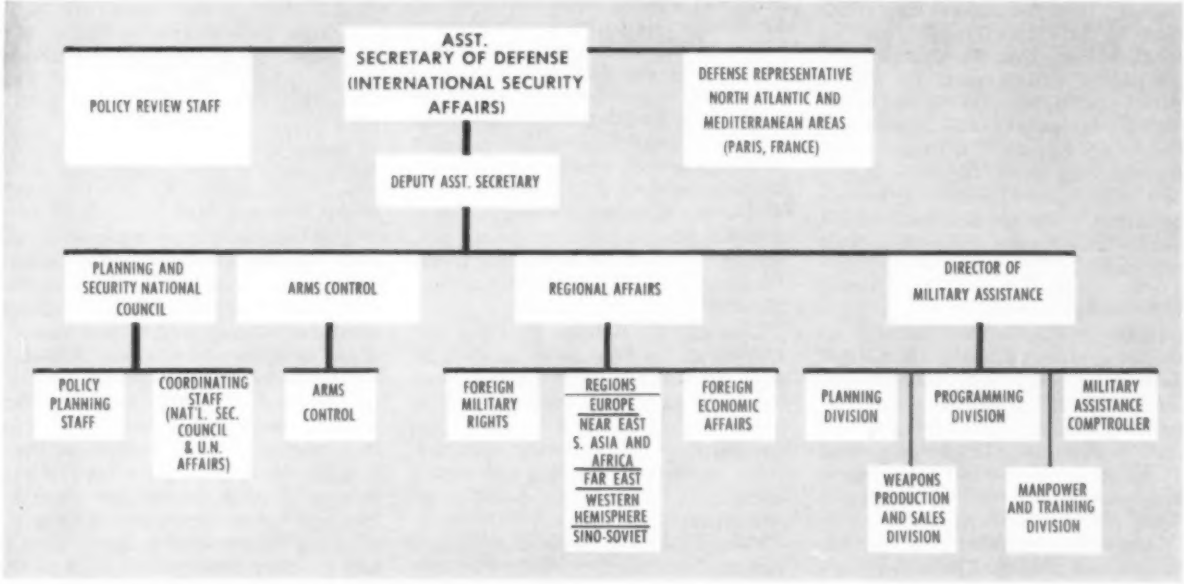
Particularly busy at the moment are the regional officers manning the Far Eastern desk—particularly those concerned with Laos and South Viet Nam. After talking with their counterparts on State's regional desk, checking with JCS, they may formulate a recommendation, for example, that the Military Assistance Advisory Group should be beefed up in South Viet Nam. Or the recommendation may have come from JCS for the regional officer to review, coordinate, and to suggest revisions before it is submitted to McNamara via Nitze.

Being enlarged presently is the Policy Planning Staff under the Deputy Assistant Secretary, ISA, for Planning and the National Security Council. The added brainpower will be welcome. According to one ISA official, the present understaffed staff can't think very deeply about long-range problems because they must place all of their effort in concentrating on the current crises in Laos, South Viet Nam and Berlin.

This staff, considered important by McNamara, is responsible for conducting political military studies, giving advice on emerging basic problems in the world situation and possible DOD actions, development or coordination of the development of DOD positions on matters under consideration by the National Security Council, and coordinating their efforts with State and other government agencies concerned with international security planning.

To fill the vacancies, temporarily Nitze has relied on The Rand Corp. and IDA.

A Policy Review Staff directed by Maj. Gen. D. V. Johnson (Ret.) and reporting directly to Nitze does broad reviews of the effectiveness of military assistance in achieving its purposes and to insure that performance is correlated with national policy objectives, and coordinating with State on MAP



evaluation matters to insure achievement of objectives.

The translation of national policy into military plans, according to Deputy Secretary of Defense Gilpatric, will be one of the biggest problems facing the Department of Defense for many years to come.

But the coordinated effort by ISA planners and the Joint Staff, "despite talk that the Rand people are taking over and making military decisions," Gilpatric believes, gives hope that a more permanent solution to the problem may be found.

Breakdown

Reporting directly to Nitze are: Deputy Assistant Secretary William Bundy; Defense Representative, North Atlantic and Mediterranean Areas and Defense Advisor to U.S. Regional Organizations Lawrence Levy; Policy Review Staff Director Maj. Gen. D. V. Johnson (Ret.).

Levy, who has a staff of 50 in Paris, France, is the principle representative of the Secretary of Defense in Europe, North Africa and the Middle East, and is also principle advisor to Thomas K. Finletter, Ambassador to the U.S. Regional Organization.

Gen. Johnson's staff conducts broad reviews from the policy and planning viewpoint of the effectiveness of military assistance in achieving its purposes to insure that performance is correlated with national policy objectives, and is the liaison with the State Department and central coordinating point within DOD on all MAP evaluation matters to insure achievement of objectives.

Nitze has three Deputy Assistant Secretaries; Hayden Williams for Regional Affairs; Lt. Gen. John A. Dabney, USA for Arms Control; and Henry S. Rowen for Planning and National Security Counsel Matters.

Williams is responsible for the direction and coordination of the development of politico-military-economic aspects of International Security Affairs affecting DOD. He is responsible for the Regional Directorates, the Directorate for Foreign Economic Affairs, and the Directorage for Foreign Military Rights.

Regional Directorates

Heads of the Regional Directorates are: Maj. Gen. Frederic H. Miller, USAF, European; Rear Adm. Luther C. Heinz, USN, Far Eastern; Rear Adm. E. B. Grantham, Jr., USN, Near East, S. Asia and Africa; Brig. Gen. Frederick O. Hartel, USA, Western Hemisphere; and Col. Thomas W. Wolfe, USAF, Sino-Soviet.

They are responsible for: the Department of Defense politico-military aspects of international security affairs pertaining to their respective regions and countries; principal advise on politico-economic policies with military policies and programs; participation in policy development and activities of international organizations on behalf of DOD; evaluation of regional and country developments of a politico-military nature in order to anticipate emergent problems affecting DOD; advice and assistance as requested on regional and country matters including the politico-military input to MAP actions and activities; participation in NSC and OCB affairs of a country or regional nature; maintenance of close relations with JCS, the unified commands, the military departments and other Defense agencies on military matters of an international nature concerning country and regional affairs; representation of DOD in staff consultations with the State Department, ICA and other governmental agencies, and the Congress on military matters of an international nature; and the Regional Director for the Western Hemisphere develops and coordinates positions of DOD on matters connected with the Permanent Joint Board on Defense.

Directorate For Foreign Economic Affairs

The acting director of this directorate is Norris G. Kenny. It is responsible for:

Policies and programs concerning DOD interest in foreign economic affairs of the U.S. Government; DOD positions on such matters as foreign economic policy, economic warfare plans, economic assistance, international civil emergency plans, trade agreements, economic defense, and bloc economic penetration; presentation of DOD positions to other agencies and representation on interdepartmental committees and U.S. delegations to international conferences concerned with foreign economic affairs; and guidance and support arrangements for DOD elements, including missions abroad, responsible for implementation of foreign economic policies and programs.

Directorate for Foreign Military Rights

Directed by William E. Lang, the Directorate for Foreign Military Rights is responsible for DOD policies, positions and staff support with respect to negotiating agreements with foreign governments for military facilities, status of forces, operating rights, and agreements for exchange of atomic information.

Gen. Dabney is responsible for advice and assistance on military aspects of ISA, and DOD positions and policies with respect to arms control. His office is the focal point for coordination with JCS and the military departments on military implications of International Security Affairs.

Directorate for Arms Control

Serving under Gen. Dabney is the Directorate for Arms Control headed by L. Addison Lanier.

The Directorate is responsible for DOD development and coordination of positions, plans, procedures and studies pertaining to arms control affairs, is the DOD focal point for coordination with other agencies and the DOD representative at interdepartmental or international conferences involving arms controls.

As Deputy Assistant Secretary (Planning and National Security Counsel), Rowen is called on for advice and assistance to the Secretary of Defense for NSC activities and long-range planning activities in connection with international security, and is the alternate defense member of the NSC planning board and DOD representative on various interdepartmental committees. Serving under him are the Coordinating Staff for National Security Counsel and United Nations Affairs, and the Policy Planning Staff.

Coordinating Staff (National Security Council and UN Affairs)

Directed by Robert H. B. Wade, the coordinating staff is responsible for: advice and staff support to the Secretary of Defense, the Assistant Secretary of Defense (ISA) and other appropriate officials on matters affecting the National Security Council, its supporting organizations and collateral activities; assuring DOD implementation of approved NSC policies and actions; custody and dissemination of documentation and working papers of the NSC and its supporting organizations and the DOD Collateral Activities Coordinating Group; and is the DOD focal point for coordination with other agencies on UN affairs, except those relating to a single regional area.

Policy Planning Staff

The Policy Plannning Staff is responsible for the conduct of politico-military studies from time to time, as directed by the Secretary of Defense; advice on emerging basic problems in world situation and possible DOD actions; development or coordination of development of DOD positions on matters under consideration by the NSC and its supporting organizations; and for liaison with the State Department and other government agencies concerned with international security planning in connection with studies and problem areas. ■

Military Assistance Program

Gen. Willston B. Palmer

Nitze's director of MAP has one of the toughest jobs in the Pentagon, runs a program that is clobbered regularly by Congress, every year gets short attention from the U.S. taxpayer—in spite of tremendous successes.

ISA — — MAP

Outline of the Military Assistance Program

BESIDES BEING the top foreign policy advisor to the Secretary of Defense, Paul Nitze has the responsibility for administration of the Military Assistance Program—a program area which occupied the attention and efforts of several Congressional committees most of the past summer.

It wasn't until September 4 that the President signed the authorization bill (P.L. 87-195), "The Foreign Assistance Act of 1961." Approximately three weeks later, Congress appropriated $1.6 billion in MAP funds for Fiscal Year 1962.

Nitze, Secretary of Defense McNamara, President Kennedy, and MAP's able Director, Gen. Willston B. Palmer, had wanted more. The Departments of State and Defense had recommended $2.375 billion for MAP. President Eisenhower trimmed this to $1.8 billion. President Kennedy trimmed it again to $1.6 billion until he and his aides had a chance to analyse the MAP program.

With mounting Communist pressure on the pheriphery of Western defenses, Kennedy revised his request upwards to $1.885, with a request that McNamara be given the authority to transfer another $400 million from the military department budgets in case of extreme emergency.

Congress was not to be swayed, and appropriated the $1.6 billion with authority to transfer $300 million on a reimbursable basis from the service budgets.

With bi-partisan unanimity, major leaders of both parties including two ex-Presidents attacked the Congressional cuts. Ex-President Eisenhower said: "I am gravely concerned to learn that after the long struggle over the financing method to be used in connection with the Mutual Security Program and after we received assurance on the part of Democrats and Republicans of continuing support of the program itself, an attempt is now under way to slash the program's appropriation . . . These slashes are incomprehensible to me, especially in the light of present world tensions."

Hurting MAP's position before Congress have been charges from the General Accounting Office and elsewhere that MAP funds are being squandered by the receiving nations. Recognizing this problem, MAP has decentralized its administration, giving greater authority to the Unified Commanders and the Military Assistance Advisory Groups in the countries.

MAP points out that most of the revealed waste is caused by ineffective and inefficient logistics systems within the recipient country's military system, which they have little or no control over.

Much to Learn

As Secretary McNamara told Congress: "Many of the recipient governments had everything to learn about supply operations and have a lot to learn still . . . There is not the slightest question that both our own management of military assistance and the supply operations of most of our Allies have been improving steadily year by year."

McNamara also said that "aircraft parts and other parts excesses, as I have gone through these GAO reports, are the items to which most attention must be given, and they are also the items that are the most difficult to inventory and the most difficult to project requirements for . . . I will take you into General Electric, Ford, American Telephone and Telegraph, the best-run corporations in the world, and you would still find inventory excesses of this type today. Inventory control is an exceedingly complex subject."

The Purpose

The purpose of the U.S. Military Assistance Program, in McNamara's words, is three fold: "It must be more active than ever in helping free and independent nations to protect their internal security. It must continue to make 'local war' clearly unprofitable, and thus to deter such wars, or the threat of such wars—which may be a vital part of the subversive effort. And it must play its part, especially in NATO, in deterring any resort to general war."

The fact is that protection of U.S. international interests with U.S. troops would be financially impossible, and it is cheaper to arm soldiers in the Republic of China, Viet Nam, Korea, Iran, Turkey, Greece, and in the underdeveloped, emerging nations of the world, subject to outside financed and

Building a modern military machine in under-developed areas like Southeast Asia (above) is the tough hurdle.

directed internal subversion.

And as the Communist block steps up guerrilla warfare within nations along its border, in Africa, and in Central and South America, the business of giving these nations the armament and instruction to defend themselves takes on greater importance.

MAP is not, and cannot be, a purely military activity. Whether it is in the national interest to give a nation military aid is a matter for foreign policy experts, and such decisions are controlled by the State Department. So far it has been decided that it is in the interests of this country to give aid to 40 countries around the world, and this number will expand as new nations continue to change the geography of the African continent.

How Much of What

The method of determining how much of what type of military equipment a country needs has always been a problem, and is the basis of much of the Congressional criticism over the years. MAP's answer has been to decentralize control so that these decisions are made by those closest to and familiar with the country's problems: the Military Assistance Advisory Group within the country, the Ambassador to the country and his staff, and the area Unified Commander who the MAAG's report to.

After the country reports are consolidated and analyzed by the Unified Commander, they come in to Washington where they are reviewed by General Palmer and ISA's country and regional experts in the Regional Directorate. Through this process, being coordinated with the Joint Chiefs of Staff and the Department of State, comes the eventual budget recommendation.

This process set up by the Military Assistance Manual, published to take effect on July, 1960, has done much to solve the problem, noted by General Palmer, of "trying to run the whole program with too few people to accomplish effective supervision of field activities."

Gen. Palmer believes that his own organization is now set up on a sound and efficient basis. The problem is, he states, that while "we can provide a country with weapons, we cannot bring forth competent military leaders and administrators, nor even the vitally essential captains, the indispensable sergeants . . . or supply and repair systems for maintaining their military equipment properly and of sustaining their armies in active operations, or for that matter even in peacetime."

Gen. Palmer sees great improvements in MAP-supported countries, leadership and logistics systems each successive year. "Meantime, we must persevere," he states.

Making sense out of the MAP organization which, as one MAP officer ruefully admits, "grew up like topsy," has been to a great extent due to the administration of Gen. Palmer.

Palmer

Gen. Palmer was recalled to duty in January, 1960 to run the MAP operation. As Commanding General of the 7th Corps Artillery during World War II, he participated in the capture of Cherbourg, in the St. Lo breakthrough, in the battle across Europe to Cologne, in the Battle of the Bulge and in the race across Germany to the Elbe.

Gen. Palmer was Commanding General of the 10th Corps in Korea during that conflict and subsequently, Assistant Chief of Staff for Logistics, First Deputy Chief of Staff for Logistics, Vice Chief of Staff, and Deputy U.S. Commander in Chief, Europe.

His selection was on the basis of his extensive experience in both the areas of military command and logistics.

With less than 100 people in his Pentagon offices, Gen. Palmer has reorganized MAP into the organization his superiors now hope can counteract

the increasing Communist threat, especially in Southeast Asia and the Middle East.

Background

Up to 1939, the United States for more than 160 years—almost its entire history—had followed a policy of "security through isolation." It had inherited a tradition of "no entangling alliances," and foreign policy was concerned mainly with insuring the ability of the United States to grow in freedom without becoming involved in alliances with the great powers of Europe. For the most part, the U.S. was an observer of and withdrawn from major world affairs.

Before and during World War I, the U.S. saw the sad consequences of a Europe dominated by an aggressive power. Even after engagement in that war, the U.S. returned to its traditional aloofness from the world scene and isolation.

A generation ago the picture began to change. Nazi Germany tried to bring the European nations one by one under the Third Reich. By late 1941 Hitler's mechanized divisions had conquered nearly all of Western Europe, and Britain was fighting for its very life against almost hopeless odds.

The United States realized its own freedom would be gravely threatened with a European continent under Nazi domination. President Roosevelt proposed and Congress approved the Lend-Lease Program which helped to save Britain and to give western civilization another chance.

After World War II, the United States found itself in a new role—heir to a heavy share of responsibility for world leadership. World conditions convinced most Americans that the U.S. could no longer return to its old peacetime policy of "no foreign entanglements." The democracies of Western Europe had come out of the war greatly weakened by the long struggle, and they were no longer able to bear the burden of maintaining world peace and order as they had done for so many years. Many of their cities and factories had been bombed out of existence, unemployment was vast and widespread, and there was runaway inflation. Europe, in short, was on the brink of collapse.

Communist pressures began to mount. Free America saw the events taking place in Esthonia, Latvia, Lithuania, Poland, Hungary and Czechoslovakia. It watched with growing concern aggression and subversion in Greece and Turkey.

It became evident that the collapse and conquest of Western Europe could eventually mean U.S. destruction, and foreign policy commitments began to increase to meet the increasing challenge to its security.

In 1947, President Truman proposed a program of economic and military assistance to Greece and Turkey, promptly labelled the "Truman Doctrine." Shortly after, the "Marshall Plan," was initiated. Through these programs, the United States acted to help 17 free countries whose stability and capacity for recovery were imperiled. The U.S. began to use its increased economic strength to help nations which had been less fortunate.

The Greek-Turkish Aid Program, the Marshall Plan, and the formation of the North Atlantic Treaty Alliance in 1949 combined to halt the Communist aggression against Turkey and to lay the foundation for the economic recovery of Western Europe.

The Mutual Security Program came into existence in 1951, incorporating most of the then existing aid programs into one program for legislative and appropriation purposes. It was designed to assist the nations of the Free World in developing their own strength. At the time, accelerated by the Korean War, a shift was being made from the heavy economic expenditures, primarily for rearming our NATO allies.

During the 11 years of its existence, the Mutual Security Program, together with the Greek-Turkish Aid Program, the Marshall Plan, and other forerunners of the present program, has been an essential instrument in rebuilding the security and prosperity of Western Europe, in strengthening many nations adjacent to the communist bloc, and in assisting many other members of the free world. The Mutual Security Program has encompassed programs for economic, technical and military assistance to the countries of the free world.

A Foundation

The Military Assistance Program has been the base for the U.S. collective security arrangements. It is the foundation upon which the U.S.'s forward strategy is built; it has been one of the principal instruments abroad supporting our foreign policy objectives.

As a result of our collective security arrangements, there is today a free world defense perimeter manned jointly by U.S. forces and by the forces of our allies. This far-flung perimeter extends through the middle of Europe, down through the Middle East, and around the rim of Asia to the northern Pacific.

U.S. strategy of collective security has been given substance by the Military Assistance Program. Largely through the program, the forces of our allies have been furnished with the weapons by which they defend this extensive area, an area of great importance to our own security.

General Lemnitzer, the Chairman of the Joint Chiefs of Staff, recently said "The Security problems of the Free World are truly mutual. The Military Assistance Program is a reflection of this basic fact. It is also a reflection of the global nature of the Communist threat which faces the United States and its Allies, and the need to meet that threat on a world-wide basis. Without any question, the assistance we have provided, and continue to provide our Allies—in the form of training and equipment—has been a major factor in thwarting Communist aggression. It will continue to be a major factor for the foreseeable future."

General Lemnitzer said he looks upon military assistance to our Allies "as adding strength and depth to the military posture of the United States." He pointed out that "It enables our Allies to organize, train, and equip units which enhance the capability of the Free World to meet the challenge of Communist aggression and subversion," and, he emphasized, "No amount of money spent on our forces could give the United States a comparable asset of trained, well-equipped forces, familiar with the terrain, and in suitable position for immediate resistance to local aggression."

U.S. Not Alone

The United States, however, is not carrying the defense burden alone. By pooling individual capabilities and resources and working jointly toward common goals, each nation in the system of collective security achieves more in terms of true military and economic security than it could hope to achieve through its own resources and at considerably less cost. Further, these nations with whom we are allied are contributing more of their resources collectively to their own defenses than we contribute through the Military Assistance Program. Our own forces represent only one-sixth of the ground forces, about one-half of the aircraft, and about one-third of the naval craft in the totals of our collective security forces.

In effect, the Military Assistance Program gives us what may be called an additional manpower and weapons system, a system that has the dual capability of adding to our deterrence of war and increasing our ability to meet the challenge of limited war and aggression. This added capability represented by the forces of our allies costs far less than any other means of increasing American military strength

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r data communication problems?

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MAP: Outline of Progress . . .

because it costs far less to train, pay, and equip a soldier from any one of our allies than it does an American soldier. This capability multiplies many times the dividends we receive from our military assistance investment.

These allies look to the U.S. for assistance in those areas where they cannot provide for themselves—in materiel, financial support, and technical assistance. We provide this assistance by three principal means:

First, by direct military assistance the U.S. provides weapons and train our allies in their use. Not all of this assistance is through outright grant, however. Some allies, notably those in Western Europe, are able to pay cash. Others buy equipment on deferred payment terms.

Second, through financial support the U.S. bolsters the economies of nations like Korea, Taiwan, and Viet Nam. The economies of these nations are unable to support, without added financial help, the large military forces required by the threat which they face.

Third, by providing technical assistance, principally to allies in Western Europe, the U.S. helps them fabricate their own defense weapons. In the early days the Military Assistance Program, provided nearly all of the weapons and equipment for our allies. In recent years, however, with U.S. assistance, they have been developing the capability of designing and supplying their own weapons. This reduces their dependence on the U.S. for hardware while at the same time it makes available to us the results of their scientific and technological accomplishments.

Each of the countries to whom the U.S. gives military assistance has a large military budget of its own. As far as possible, it feeds, pays, clothes, and trains its own forces, and furnishes them the military equipment its resources permit. As their economy becomes capable of doing more, the U.S. asks each nation to take up its fair share of the burden. As a matter of fact, part of the enormous burden which the United States bore virtually alone during the period of recovery in Europe is now being shared in increasing measure by our European allies, who, with U.S. help, have been restored to health and vigor.

Allies Need Aid

The fact remains, however, that some of our sturdiest allies, like the Turks and the Koreans, whose large and well-trained forces are immensely valuable to us and the whole of the free world, simply do not have the financial resources to arm, equip, and train their own forces and keep them on the payroll without both military and economic assistance.

Now, with the Military Assistance Program eleven years old, one may well ask, "What has it accomplished?"

Since the enactment of the program by Congress, allied strength has increased in rather impressive fashion. In 1950, the active ground forces of our allies numbered about three and one-half million men, poorly trained and poorly equipped. There were fewer than a thousand combat ships in their naval forces. Their air forces were equipped with fewer than 10,000 aircraft, less than 500 of which were jets.

Today, there are over five million men in their ground forces. The combat ships in their navies have increased to nearly 2500, an increase of almost 150 percent. They have air forces which have over 12,000 conventional aircraft and almost the same number of jet aircraft—more than 20 times the jets they had in 1950.

Moreover, the men making up the allied forces are much better trained and organized than were the troops of 1950, and their morale is much higher. They have better equipment and support facilities. They have more and better airfields, improved communications, and early warning systems. It would have been virtually impossible for our allies to make these vast improvements in size and effectiveness had it not been for the military assistance provided by the United States.

To cite more specifically some of the accomplishments in Europe and the Far East made possible by the assistance given:

In 1949, when the North Atlantic Treaty Organization was established, NATO had fewer than 20 divisions. It

had fewer than 1,000 operational aircraft and less than 20 airfields from which modern aircraft could operate. Naval combat ships were either in mothballs or had been scrapped.

Today, NATO is an integrated force with military strength nearly five times greater than in 1950, under the Supreme Allied Commander, Europe.

Back in 1952, there were no integrated plans for the defense of the North Atlantic and to maintain the vital Atlantic lines of communication.

Today, eight NATO countries have earmarked naval, ground and air forces in an integrated defense plan under the Supreme Allied Commander, Atlantic.

In the Far East, there are strong allied armed forces which we have helped to organize, equip, and train. The Republic of Korea has a well-trained, well-led, combat ready force of 19 divisions, supported by small but highly effective air and naval components. The Republic of China Army on Taiwan is similarly well-trained, well-led, and combat ready with 21 divisions ready, if necessary, to give a good account of itself.

The Military Assistance Program has promoted and continues to promote a climate of mutual interest, confidence, and collective security so essential to the economic growth and progress of the Free World.

Breakdown

Gen. Palmer and his deputies, according to regulations, direct and supervise all Department of Defense aspects of Military Assistance, and act for the Assistant Secretary, ISA, in Military Assistance matters.

Under General Palmer are five divisions: the Planning Division, Programming Division, the Military Assistance Comptroller, the Weapons Production and Sales Division, and the Manpower and Training Division.

Planning Division

Under the direction of Henry J. Kuss, the Planning Division coordinates deveolpment of Military Assistance plans, including: the issuance of planning guidance; the implementation and monitoring of the planning system and schedule; staff direction for review of military assistance plans; and conducting studies of military assistance planning problems.

The division also furnishes military assistance data for the National Security Council policy papers.

Programming Division

The Programming Division, headed by Col. William I. Yates, coordinates development and review of MAP, in accordance with approved military assistance plans, established criteria, procedures and order of magnitude dollar guidelines; conducts liaison concerning pricing, lead-time and availability of military assistance items and services; secures State Department program approval as required; and gives data processing support.

Military Assistance Comptroller

Comptroller Markely Shaw and his staff conduct MAP budget and budgetary performance analysis; draw up apportionment and allocation schedules for military assistance funds, including justification; acts on reports of audits connected with MAP's program; formulates accounting policy, fiscal procedures, fund controls and consolidated reporting for military assistance funds; compiles operational data analysis of MAP; and prepares Congressional presentations and reports on MAP.

Weapons Production and Sales Division

Under the direction of C. O. Rowe, the Weapons Production and Sales Division provides staff direction of Weapons Production projects; liaison with the Office of the Director, Research and Engineering on Mutual Weapons Development; develops, coordinates and reviews Mutual Security Military sales; formulates policies concerning international regional logistics systems; represents DOD on the State-Defense Military Information Control Committee, and formulates the DOD position on export-import controls of military equipment.

Manpower and Training Division

Under the direction of Col. W. A. Enemark, the Manpower and Training Division gives policy and staff supervision with respect to manpower and organization of the MAAGs; formulates training policies and procedure; coordinates review of training submissions; has staff supervision over the Military Assistance Institute; is the DOD point of contact with State in international education and cultural activities; and coordinates selection of key personnel for MAAG's. ■

LEFT: part of the MAP payoff — joint training, here involving Belgian, Dutch and Luxembourg troops.

RIGHT: in hardware, aid made possible fast buildup of F-104 fighter power in Germany.

Director of Research and Engineering

Dr. Harold Brown

In order to make correct choices between rival weapons systems Dr. Brown has reorganized his office to assure that gaps do not occur between technology analyses and systems analyses, and that "we don't have 20 people reporting to me who never see me."

John H. Rubel
Assistant Secretary of Defense For Research and Engineering

"We Do Our Job By Exception . . ."

The Office of Defense Research and Engineering, in operation only two years, continues to expand its role as decision maker in weapons systems R&D.

THE UPHEAVAL in the Pentagon creating a more unified responsive organization occurred in the research and development area almost two years ago with the establishment of the Office of the Director, Research and Engineering.

Indicating the emerging importance of the scientist in military planning, the Director was made the fourth ranking civilian in the Pentagon hierarchy (after the Secretary of Defense, Deputy Secretary and the three Department Secretaries).

The two-year shakedown cruise of the new Office has shown the need for some changes, including the elimination of the Office of Guided Missiles and the addition of an Assistant Secretary of Defense, filled by John H. Rubel. Though studies by the R&D staff and by the Office of Management and Organizational Planning in the General Counsel's Office will create further centralization, the basic organization will be retained.

At the service level significant reorganization of the Air Force R&D components occurred last year, and will occur within the Army R&D establishment this year. R&E is presently studying plans to upgrade and reorganize military laboratories.

The Office of Research and Engineering will never have a permanent organization chart (that is, permanent for long), which must change, in the words of Director of Administration Vice Admiral Charles B. Martell, "to be responsive to rapidly changing technology."

The Director of Defense R&E is one of the youngest men ever to be in charge of a major military post. Dr. Harold Brown, just 34, received his AB degree at the age of 18, his AM at 19 and his PhD (in Physics) at the age of 22. He has been director of the University of California's Lawrence Radiation Laboratories, and chief United States scientist for the negotiations on a nuclear test ban at Geneva in 1958 and 1959.

Dr. Brown has served as a member of various scientific advisory panels for the Pentagon and the White House, and his specialties in the scientific community are nuclear physics, nuclear reactor design, nuclear explosions and weapon systems.

After nine months in office, Brown has been given general approval by those responsible for research and engineering in the services. One top service manager told AFM: "At first I didn't think he had lived long enough to have mature judgment, but the decisions we have received from him so far have indicated that he has the ability to hold down the job . . . and he doesn't always agree with us."

As Director, Office of Research and Engineering, Dr. Brown has the major responsibility for choosing among rival weapons systems advanced by the military services.

Under his direction are the Advanced Research Projects Agency and the Weapons Systems Evaluation Group, which have separate stories about them in this issue.

Dr. Brown points out that it is impossible to direct all defense research and engineering. "Though our people are working very hard, it is still not possible to go into all areas.

"We do our job by exception . . . by selecting those areas which are important, and by setting examples."

Systems and Research

The two major changes in the R&E organization, according to Dr. Brown, were the establishment of the Deputy Director for Weapons Systems, and the Deputy Director for Research. This was done, Dr. Brown said, "so that we don't have 20 people reporting to me who never see me."

The specific technologies (air defense, limited warfare systems, strategic weapons, ranges and space ground support equipment, aeronautics, and ordnance) are assigned to Assistant Directors and Directors under the Deputy Director for Weapons Systems.

According to Admiral Martell, considerable attention is given to review of technology. When the office was completely divided into technological areas a gap existed between technology analyses and systems analyses.

Some of the recent administrative changes were made, according to Admiral Martell, "to make sure we don't get into two separate lines of thought so that hardware people don't know what the technological people are doing."

The weapon systems and technological review effort is coordinated with the applied and basic research effort, broken down into offices for: atomic, biological and chemical warfare; electronics; fuels and materials, maintenance engineering; science; communications; and special projects; reporting to the Deputy Director for Research.

The Office of Defense Research and Engineering still operates on the concept originated by its first Director, Dr. Herbert F. York, of evaluating the worth of a new weapon in relation to its mission instead of its environment components.

Three New Assistants

In other words, the evaluation of early warning, navigational and communications satellite projects is based primarily on their relation to the entire air defense, navigation and communications systems, and not solely in relation to the space program or in relation to their boosters.

"How does a communications satellite fit into the entire communications program?" This is the question Dr. Brown and his assistants will ask in evaluating the need for such a satellite, and deciding how fast its R&D should progress. The questions of where it fits in the booster development program are secondary to the importance of its missions.

The same yardstick will apply to missiles, aircraft, ship propulsion, nuclear and conventional weaponry, propulsion, ground support, ground transportation, better bullets, material, food, blood preservation, and all of the major Defense R&D projects.

After having reorganized his office Dr. Brown hopes to be able to assess with greater reliability which new project is most important, needs the most money, and should progress at a faster rate.

To augment the technological organizations looking at weapons with specific missions, Dr. Brown has established three special assistants for Arms Control, Command and Control, and Space.

These offices will advise Dr. Brown as to the fundamental philosophy and technology of these specific areas. For example, the Office of Communication will follow the Army's Advent Communication Satellite program in detail, while the Special Assistant for Space with his small staff will analyze Advent in relation to total space policy, including what booster it should use in relation to its eventual total weight.

Included in the R&E organization is an Assistant Director for International Programs, which reviews the technological requirements of joint international weapons developments. The Defense Department depends on R&E for the evaluation of the projects and International Security Affairs for the evaluation of policy.

Dr. Brown thinks that the U.S. has failed to utilize to the fullest extent the research and developments of Western Europe, and is working towards a system whereby weapon systems developed there will be evaluated on the same basis as weapon systems developed in the U.S.

The powers of the Office, R&E are extensive, to the point where a service technical development plan can be disapproved even for preliminary evaluation. The Office also can order the development to be financed at a higher rate than the service had proposed.

If the project does not fit under the service's roles and missions, the preliminary research and development can still be done by the originating service before transfer.

Dr. Brown feels that it is beneficial that the officers and scientists engaged in research and development both at the service and DOD level do not feel as strongly about service rivalry as their colleagues apparently do in other areas of military effort.

More Research Needed

As with every other major organization within the Defense establishment, R&E has been reoriented to consider the problems of creating a more effective conventional warfare capability. One of the biggest problems in this area, Dr. Brown feels, is the question of air support for ground troops.

Two areas which the Director feels intensely about and speaks out on are the need for more basic research, and for improvement of the government laboratories.

He believes that the nation ought to double the level of effort in basic research during the next seven or eight years, and that the major portion of this expansion should come from private industry, universities, and nonprofit laboratories.

Though at a lesser pace, Dr. Brown believes that government must also expand its level of effort in basic research—the Department of Defense, and to a greater extent, the National Science Foundation.

He points to the fact that basic research is needed for next year's tech-

nology, not the next decade's, or the next twenty or thirty years, as used to be the case.

Examples of the narrowing time gap between advances in basic research and its application, Dr. Brown cites are the time difference between concept and application of the principal of the maser and laser—electronic devices which produce amplification by stimulated emission of radiation from atoms or molecules.

The Maser discovery—utilizing the microwave region—was rapidly applied in less than ten years. The Laser—utilizing the visible light region—was applied even more quickly. The principals of super conductivity and high magnetic field materials were applied rapidly. Unless basic research is intensified, the storehouse of knowledge will be depleted.

In a recent speech Dr. Brown sharply assailed the way Government-operated military research activities have been carried out, and promised to work for improved management, elimination of some of the program's working frustrations, and increases in salaries for government scientists in military research projects.

"In House" Research Needed

His speech is supposed to be the first step in a review ordered by the President of contracting procedures in scientific and technical work.

The Department of Defense has about 100 research and development agencies which spend about $1 billion a year. Augmenting these laboratories are about 350 small, nonprofit companies set up during the last ten years to perform government research.

Dr. Brown defended the services need to carry on a sizable "in house" research and engineering program, and outlined four reasons for continuing them:

1—To fulfill the need for continuous research peculiar to military needs and make it possible for the military to bring findings before the scientific community;

2—For objective advice and evaluation of outside scientific projects;

3—To manage or help manage weapons systems programs without distracting the military officials who are assigned to operations.

4—As an essential part of the system of technical education for military officers.

Removing the Layers

Dr. Brown also said he favored the nonprofit laboratories operated by private groups under contract, such as Aerospace Industries and the Rand Corp., since they provide "the swiftest practical response to urgent needs" and "a valuable detached view." Dr. Brown said they could deal with scientific problems in the interests of more than one military service, and were a device for gaining sustained support by a university group. These organizations presently receive about $400 million of the $7 billion Department of Defense research and development budget.

Dr. Brown said that his staff's progress reports "recognized that many R&D laboratories are too far down in the military organization from the top R&D authorities. The organization for management of RDT&E in the Defense Department can be simplified and a trend in which rank has tended to become identified with review rather than management must be reversed."

". . . it is clear that one of the most effective ways to remove layers of management has been to appoint a civilian or military project director of sufficient talent, authority and rank that only persons of like talent or rank may presume to police his effort," Dr. Brown said.

As for salaries for scientists, Dr. Brown said ". . . if Congressional action to increase the pay range for PL-313 positions is not taken next year, I believe that Defense should propose higher rates for at least a portion of its positions. We must also continue our efforts for a more adequate number of these positions."

He believes that government scientists ". . . may feel frustrated when there are too many layers of intervening managers, with the chance that lack of understanding of the operating problems may be involved," and that management must "understand the difference between a research and development program and a scientific job-shop."

The salary problem, Dr. Brown believes, "in no case is . . . more critical than in the case of the scientist who directs a Defense laboratory . . . industrial and commercial laboratories can often pay a salary that is double."

"Highest Salary Level . . ."

"I believe that the directors of the principal Defense laboratories are at least as important as the staff scientific advisors of the management agencies and we expect them to be paid at the highest salary level permitted by Civil Service regulation," and ". . . the leading scientists and engineers in the laboratory should not be penalized or driven out of the laboratory pending a change in Civil Service salary ceilings which would allow a satisfactory solu-

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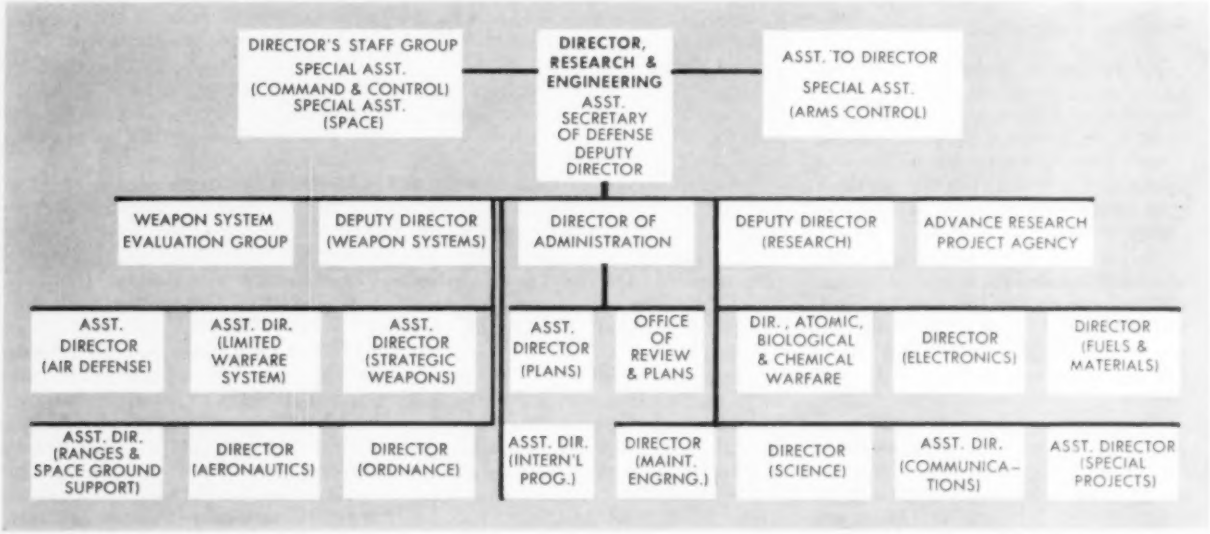


ARPA Director

Dr. J. P. Ruina

ARPA, shorn of its military space responsibilities, has been given the important, permanent job of managing R&D projects "either of interest to more than one service or lie outside the specific missions or of interest to them all."

RESEARCH & ENGINEERING

ARPA Given Key Post-Space Role

A staff of 60 experts will manage about $186 million worth of research projects during FY '62 through contracts with service laboratories and private industry.

Advanced Propellant Chemistry Research is one of ARPA's major projects, funded at $18 million in FY '62.

AFTER MANY YEARS of wandering around the Pentagon with an ill-defined, sometime tenuous role, the Advanced Research Projects Agency has been given a permanent, important position to play on the team of the Office of the Director of Defense, Research and Engineering.

Child of the space age and at one time responsible for the entire Defense Department space program, ARPA today is a tightly knit research organization assigned projects defined by its Director, Dr. J. P. Ruina, as "either of interest to more than one of the military departments or lie outside the specific missions or interest of all of them."

When ARPA returned most of its space projects back to the services and subsequently the Air Force was given principle responsibility for the Defense space program, the organization changed character. The space scientists went back to the Air Force, the National Aeronautics and Space Administration, and to industry. Its present relationship to the Defense establishment is much like the relationship between the Office of Naval Research and the Navy.

Present research projects, budgeted for $186 million, include: Ballistic Missile Defense (Project Defender), $104 million; Nuclear Test Detection, $37 million; Advanced Propellant Chemistry, $18 million; Materials Research, $17 million; Energy Conversion, $5 million; Toxicology, $800,000; Reliability Studies, $200,000; and Technical Studies.

ARPA has no major laboratories, and

How to show the sky in stereo

Up till now, radar has literally been blind in one eye. It lacked one of the prime dimensions—depth perception. Conventional radar could only show objects in two dimensions. Either direction and distance *or* height and distance.

This limitation often makes radar lag behind the pace of modern aircraft—forcing planes to slow down in the busy intersections over airport areas.

But now the other eye has been opened. Hughes' new 3-dimensional—or stereoscopic—radar presents a scaled-down "cylinder of sky." Watching this radar, you could see the earth, the air space above and aircraft represented with a definition never before possible. The result: planes could move through busy intersections with new speed and safety.

This new radar display console—called Stereoscan—has two Hughes Tonotron* picture tubes which are combined to make this startling 3-dimensional view possible. Because they remember images—they produce a radar picture where the "blips" leave contrails like a jet. It is these patterns that clearly show the direction *and* altitude *and* distance which separates the planes.

This improved radar display is also more accurate, easier to view and can be used under normal room lighting.

Electronics is our business. A Stereoscan console, operating with service proven Hughes 3-D radar, has shown its potential at the Hughes, Fullerton, California facility. It is one more example of Hughes' ability to break ground in science—both for commercial and defense purposes.

Creating a new world with electronics

HUGHES

HUGHES AIRCRAFT COMPANY

Hughes 3-D radar display console can give a continuous view of sky activity. Integrated with a complete control system, it would tell air traffic controllers if planes were on a collision course. They could make swift decisions and direct air traffic in a fraction of the time it takes today.

**Trademark Hughes Aircraft Company*

has a staff of slightly over 60 scientists, engineers and management experts. With few exceptions it uses the laboratory resources of the military services and private industry to conduct its experiments.

The basic and applied research projects under ARPA's direction were given to them by the Director, Research and Engineering, Dr. Harold Brown. ARPA's braintrust, in analysing a problem Brown has given them, may come up with a new problem area they believe warrants study, and go to Brown with a research project proposal.

ARPA's Director, Dr. Ruina, is one of the most experienced military scientists in the Defense establishment. Born in Poland and possessing a Doctorate in Electrical Engineering from the Polytechnic Institute of Brooklyn, Dr. Ruina has taught at Brown University, has been Deputy for Research to the Assistant Secretary of the Air Force for Research and Development, and was Assistant Director of Defense Research and Engineering under the previous Director of Defense Engineering, Dr. Herbert F. York.

No Problems

Dr. Ruina is presently on leave from the University of Illinois where he is Professor of Electrical Engineering and Research Professor at the Coordinated Science Laboratory. His principle study in the military science field was and is, defensive weapons systems, including anti-aircraft, anti-missile missiles and interceptor aircraft.

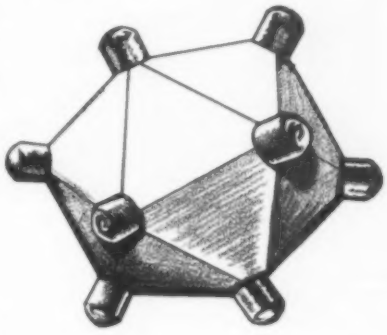
With Ruina as its Director, ARPA has worked well under its new format. According to its overseer, Dr. Brown, ARPA has proved to be "just the right thing." According to R&E's Administrative Director Vice Admiral Charles B. Martell, ARPA has "shaken down into an extremely able organization."

Old hands on the ARPA staff say they couldn't be happier with the change. As one long-time ARPA scientist put it: "after getting out of space we have had no problems but those assigned to us."

The Present ARPA organizational structure gives Dr. Ruina two Deputy Directors to assist him, a Director for Special Programs and a Director for Program Management.

Riding herd on the assigned projects are five Assistant Directors for: Ballistic Missile Defense Research; Ballistic Missile Defense Engineering; Nuclear Test Detection; Propellant Chemistry, and Materials Sciences. This list will expand and decrease as ARPA takes on new projects in new areas, and finishes present projects.

Joint ARPA-AEC research project is icosahedron-shaped Vela Hotel satellite to detect nuclear explosions.



An important area of research ARPA is conducting is ballistic missile defence, which, according to Dr. Ruina's testimony before Congress, can be broken down into three major categories: ballistic missile phenomenology, advanced techniques, and systems concepts.

"Research in phenomenology," Dr. Ruina stated, "includes a study of the environment through which a ballistic missile will pass during the various phases of its trajectory and the investigation of the behavior or a missile in that environment . . ."

Future Defense Research

Work in advanced techniques, Dr. Ruina explained, "is concerned with the development of instruments and techniques, for example, radars, and other sensory devices, needed to collect experimental data and to prepare the way for the design and development of similar instruments and techniques which may be required ultimately in missile defense systems."

This research is expected to provide answers providing hardware for the second generation defense systems after Nike Zeus, the present BMEW system, and the Midas satellites.

The nuclear test detection program,

R&E—ARPA . . .

Present basic and applied research is needed for future weapons systems.

Ruina testified, "is designed to provide data enabling the development of an effective system for the detection of nuclear explosions, underground and at high altitude."

Results of this research include the effort to establish a world-wide network of standardized seismic instruments, the development of a prototype model of a detection station, a program of detonations to provide experimental data, and the program to develop the Vela "piggy back" satellite in conjunction with the Atomic Energy Commission to detect nuclear explosions in space.

The materials research program is conducted to find the super strength materials needed by new weapon systems capable of operational use under the most extreme conditions. ARPA was given this program because of the weakness of materials research programs in this country.

The ARPA Advanced Propellant Chemistry research project at first included only solid propellant research, but now has been expanded to include research in the areas of liquids and hybrid propellants. Objective is to develop propellants providing at least ten percent more specific impulse than the best propellants under development today.

ARPA also conducts research into advanced research in toxicology and energy conversion (Project Lorraine), performs theoretical studies in reliability, and in other advanced concepts such as Project Icarias, a proposed guided aerodynamic anti-submarine weapon system. On the frontier of scientific knowledge, ARPA conducts basic research into uncharted areas.

ARPA makes available the necessary funds for the various projects that it handles from its own budget and provides overall technical management of approved programs.

As in its space days, ARPA still fills out its staff with scientists on loan from the Institute of Defense Analysis.

In making a final decision on a given project, one of the most important groups within ARPA is the Office of the Director of Program Management. He, Dr. Ruina and his Deputy Directors, and a representative from Office of the General Counsel, make sure all of the necessary management considerations are included in a given proposal before it gets final approval. The criterial include costs, where the project will fit in overall defense policy etc.

From all indications ARPA will continue as one of the major contributors of military research and the Defense work of the nation as a whole.

And if ARPA was born of Hysterial out of Sputnik, it has matured well, and will maintain its record of making liars out of the many would-be prophets who predicted its early end. ■

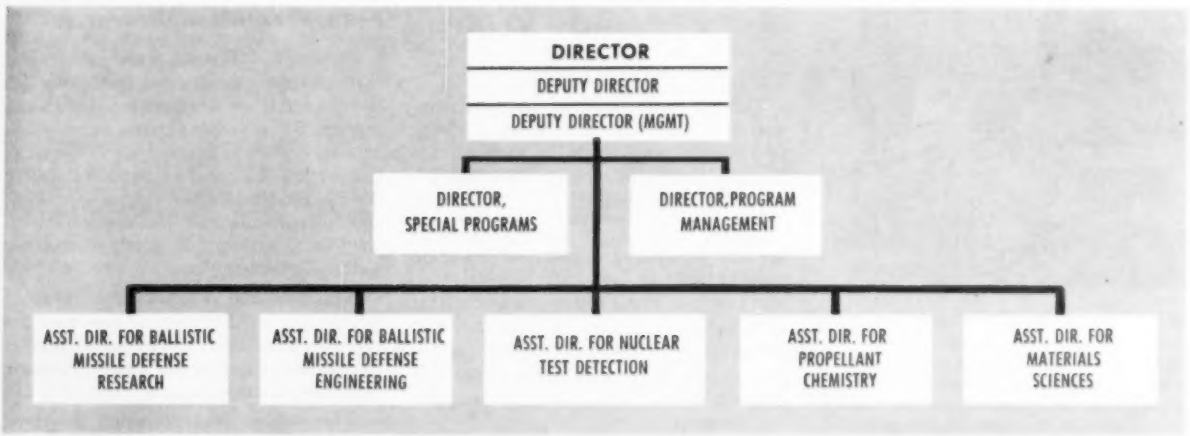
Research and Engineering

(Continued from page 84)

tion to the laboratory director's salary problem."

Attacking present organization, Dr. Brown said "many of the Defense laboratories remain buried within procurement agencies despite the formation of RDT&E commands and Assistant Secretaries/Research and Development within the Military Departments."

The trend toward greater unification, improvement of the laboratories and the service R&D organizations, according to Dr. Brown, will continue. "I don't know how fast or how far." ■


DIRECTOR
DEPUTY DIRECTOR
DEPUTY DIRECTOR (MGMT)
DIRECTOR, SPECIAL PROGRAMS
DIRECTOR, PROGRAM MANAGEMENT
ASST. DIR. FOR BALLISTIC MISSILE DEFENSE RESEARCH
ASST. DIR. FOR BALLISTIC MISSILE DEFENSE ENGINEERING
ASST. DIR. FOR NUCLEAR TEST DETECTION
ASST. DIR. FOR PROPELLANT CHEMISTRY
ASST. DIR. FOR MATERIALS SCIENCES

Weapons Systems Evaluation Group

Lt. Gen. William P. Ennis, Jr.

WSEG's charter demands "rigorous, unprejudiced and independent evaluations of present and future weapons under probable combat conditions" and that's what they deliver—often to someone else's chagrin.

R & E — — WSEG

How to Take the Sales Pitch out of Projects

HOW TO INJECT a strong dose of common sense into military hardware aspirations, i.e. tying up operational concepts (or hopes) with technical feasibility and cost effectiveness, is a problem that has vexed military forces for decades. (The British had an operations research organization as far back as 1939, working on the problem of integrating radar into their overall air defenses.)

The technological revolution of the last handful of years has boosted operations research into an impressively powerful position in military organizations—even though it frequently doesn't seem so on the organization charts. The Army's Operations Research Office works under contract with a newly organized non-profit corporation, the Navy's OEG with Massachusetts Institute of Technology, and the Air Force has a whole series of contracts designed to accomplish similar ends, principally with the RAND Corporation.

But in point of impact and influence probably the strongest, and least publicized, is the Defense Department's Weapons Systems Evaluation Group, currently headed by Lt. Gen. William P. Ennis, Jr. Set up within a year after the national military establishment itself was created, in 1947, WSEG draws on three kinds of skills: military, administrative and scientific; has basic objectives which demand "rigorous, unprejudiced and independent evaluation of present and future weapons under probable combat conditions."

The objectives, as outlined in a Defense instruction in 1956 following a streamlining and boosting in importance of the WSEG operation:

"1. To provide the Defense Department with comprehensive, objective and independent analyses and evaluations under projected conditions of war which will include but will not necessarily confine to present and future weapons systems; the influence of present and future weapons systems upon strategy, organizations, and tactics; the comparative effectiveness and costs of weapons systems; (2) to make available to the Defense Department timely advice and assistance to aid decisions in the allocations of resources for development of the most effective combinations of weapons systems."

Talent Overlooked

While WSEG normally splits its problem analysis time about 50-50 between DDR&E and the Joint Chiefs of Staff, lately, swept up by the hard driving pace of the new McNamara team, their top talent has been snowed under doing work for other people. Says Ennis, "our biggest problem right now is the number of people we've had to turn out on studies for other offices. We have done a lot of work for Charlie Hitch's people, for instance, basically because he has learned that in many cases the things he wanted to know for his program package effort are things WSEG already had."

Because the people they (Hitch, et al) want are normally the best WSEG has in the field, this has meant that WSEG's own projects are being held up and it's likely this piled-on workload won't ease for at least a year—the estimated time when the bugs will be out of Hitch's program package effort and it will be running smoothly.

In one way, this new demand is quite a compliment to their reservoir of competence and technical knowledge. The high calibre of their military and civilian professional staff would probably be enough to earn them respect in Defense circles in any event. What has made their study conclusions even more highly respected is that they have acquired a reputation for living up to their "independent analyses" charter. This reputation has been gained in spite of the fact they secure military operations talent from the four services.

Even though their studies do not recommend but merely reach "a bunch of conclusions," and even though these conclusions for DDR&E or the JCS sometimes contained differences of opinion, WSEG staffers are convinced it's no coincidence that usually about a year after a study is released the service or services involved, or their hardware, begin to reflect what that study uncovered. Adds Ennis, "we don't care who gets the credit as long as the problem is corrected. The impressive thing to me is that regardless of what service these staff people come from, they seem to care very little about whose toes they might step on when they become involved in a study—including their own."

WSEG is likely to run the whole

military hardware gamut in its studies from general areas such as reconnaissance to specific areas such as comparing the military capability, cost effectiveness and "fit to strategic thinking," of a specific pair of missiles. They have even "backed into" arms control and disarmament recently because anything done in this area would effect military efforts.

Although their organization (see below) has been drawn out on a typical wall chart, the organizational arrangement is changed to handle specific projects. Typical of the way WSEG handles a project report can be outlined in the following major steps:

The requirement for a study comes to WSEG either from the Joint Chiefs of Staff or the Director of Defense Research and Engineering. Other agencies at the Department of Defense may request WSEG to prepare studies by submitting their requirements through either the JCS or DDR&E. WSEG itself may initiate a study if it is considered relevant although normally the matter is discussed with the JCS or DDR&E so that either or both will request such a study to be prepared.

Usually the Director of WSEG and his Director of Research have already been aware of the need for this study. They now make a more thorough analysis of the requirement.

The Director of Research designates a leader for the project whose first task is to formulate a plan for project study.

1. The Project Leader goes to the Review Board with a project study plan. The Review Board discusses and analyzes the project leader's plan and gives appropriate suggestions and recommendations.

The work performed within the Project by the Project Leader or staff members is as follows:

2. Military and civilian personnel with the relevant background and technical know-how are assigned to specific areas of the problem. Project members can be found with just about every kind of background that might be needed in a WSEG study. Members of the Ballistic Missile Group might be called on to analyze a new concept in missiles; a mathematician, to analyze, to compare the costs of the systems being evaluated.

3. The project study begins.

4. Staff members investigate the project; information is gathered; and all related data are compiled.

5. Project members prepare and issue their findings in the form of project memoranda as the elements of study are prepared.

6. Then the entire written report is put together making use of the findings of the past weeks and months. There follows a period of review and criticism by the project members themselves.

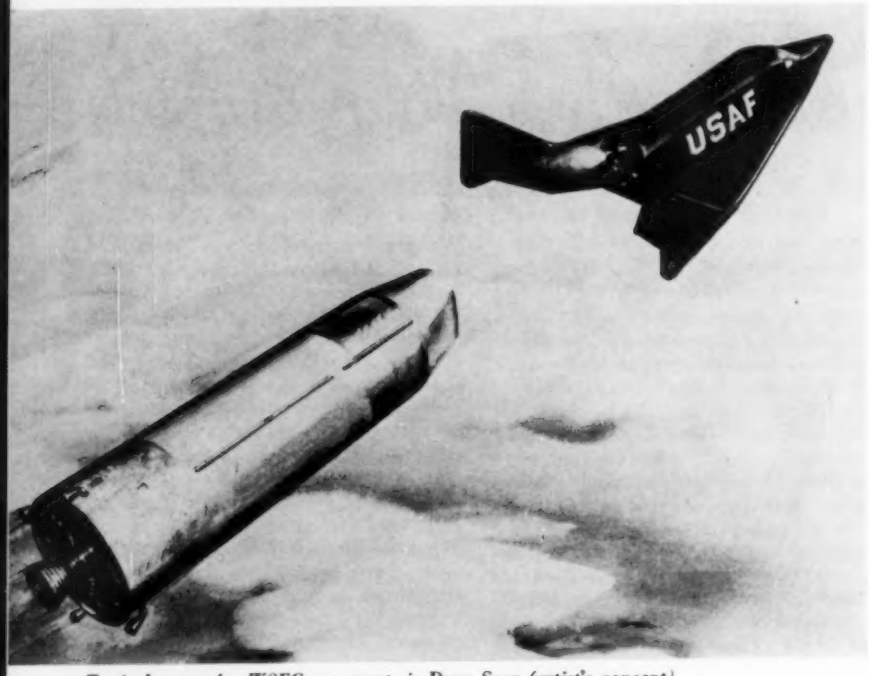
7. When the project leader is satisfied that the study has filled the requirement he submits the project report to a Technical Review Panel. This is an independent scientific review by qualified personnel designated by an assistant Director of Research.

8. Comments of the Technical Review Panel are used as guides for changes, additions or other revisions. The project members once more revise the report and submit it to the Director of Research for review and action by the Review Board for final review.

9. After the Review Board has screened the report thoroughly for adequacy and accuracy it is ready for approval by the WSEG Director, and then submitted to the agency which requested the study.

As far as the basic organization itself breaks out, here are the thumbnail job descriptions on the ten major WSEG organizational components:

The Director is a senior military officer of three star rank appointed from one of the three military departments on a rotating basis.



Typical target for WSEG comments is Dyna Soar (artist's concept).

Directs Work

The Director of Research, or chief scientist of the group, supervises and directs work assigned by the Director and serves as Chairman of the Review Board.

Projects assigned to WSEG normally come under the Division of Project Studies. The division consists of project study and evaluate specific problems. Naturally, then, the composition of these project groups changes as the requirements on WSEG change.

The Division of Supporting Studies does exactly that. Specific studies may be carried out in supporting current project activities and in other cases may be carried out with a view towards future needs. The sorts of studies the division is concerned with can be inferred from its various groups: Mathematical Techniques, Cost Analyses, Social Studies, Ballistic Missiles, Nucleonics, Air Defense, and Under-Sea Warfare. Other groups are added as required.

All military personnel, except the Director and members of the Secretariat, are assigned to the Military Studies and Liaison Divison. The Army, Navy, and Air Force each assigns an officer of Major General or equivalent rank, to serve as its senior member, with the senior of the three serving as chief of the division. Members of the division:

1. Advise and review project activities regarding military requirements and assumptions.

2. Maintain liaison with other DOD activities and obtain data to assist in WSEG project studies.

3. Advise on projects to be undertaken by WSEG.

(Please turn to page 120)

Defense Comptroller

Charles J. Hitch

"If we are called upon to fight, we will be interested in task forces (not in vertical Services), in combinations of Army, Navy and Air Force which are functional in nature." Hitch's job: see that the budget is made up the same way.

Budget: Where Changes Hit Hardest

ONE OF THE most significant changes occurring presently in the Department of Defense is going on in the Comptroller's shop.

Designed to give top policy decision makers information on resource allocations in the form of program packages, the change will allow Secretary of Defense McNamara and his top managers to base decisions on the relation of costs to weapon systems, tasks and missions. The new budget will show the full time-phased costs of proposed programs and provide the data needed to assess properly the cost and effectiveness of alternate programs.

As one budgeteer points out: "the new system is right from a management philosophy standpoint. It will give us something we never had before—an overall program budget process."

What budgeteers visualize, according to DOD Comptroller Charles J. Hitch, is a three-phase operation: (1) the review of requirements, (2) the formulation and review of programs extending several years into the future (from five to seven years), and (3) the development of the annual budget estimates.

The first phase has been under way since March. McNamara assigned to the Joint Chiefs of Staff, the services, and various elements of his own office, specific projects which dealt with the most critical or difficult requirement problems, such as estimates on how many strategic bombers and missiles will be needed in the next ten years to destroy priority target systems. Another project examines requirements for airlift and sealift to meet various contingency war plans, and the most economical means of providing them. Another project was to estimate, for various major items of ground equipment, the comparative advantages of costs of: (1) refurbishing existing equipment, (2) replacing it with new equipment off the assembly lines, and (3) expediting the development of still better equipment.

These projects were not requirements studies in the traditional military sense. They were military-economic studies comparing alternative ways of accomplishing national security objectives, and attempting to determine the one which accomplishes the most for a given cost or achieves a given objective at the least cost. Some of the studies involved rather complex analyses by various elements of the Defense Department with the help of such research groups as the Weapons Systems Evaluation Group, Rand, etc.

Program Packages

- **I.** ***Central War Offensive Forces***
- **II.** ***Central War Defensive Forces***
- **III.** ***General Purpose Forces***
- **IV.** ***Sea and Airlift Forces***
- **V.** ***Reserve and National Guard Forces***
- **VI.** ***R&D (Including "Space")***
- **VII.** ***Service-Wide Support***
- **VIII.** ***MAP***
- **IX.** ***DOD***

Chart 1. The packages.

The requirements studies were selective rather than comprehensive in scope. They were directed at the most important areas, and to provide a firmer basis for the program decisions in the second phase of the operation.

The second phase was started in May. A memorandum was sent out to Departmental Assistant Secretaries for Financial Management, which provided general guidance to the military departments for the development and submission of program data. The departments were given no dollar ceilings but were instructed instead, to use as a base force projections prepared by the Joint Staff of the Joint Chiefs of Staff which reflected the program decisions, explicit or implied, in the fiscal year 1962 budget, as amended in March and May.

Departments were asked to submit proposals for additional forces and new programs (projected wherever possible through 1970) which, in their judgement, were required to support U.S. basic national security policy. They were particularly encouraged to submit alternative forces and programs so that the Secretary of Defense, in reaching his decisions, could have before him the principal choices available in achieving national security objectives. Total costs of each proposed program must be shown for at least the next five years.

Force Structure	Production (Units)	Lead Time
Aircraft Forces		
B-52 (Including separate identification of GAM's)	125	12 mos.
B-58	125	12 mos.
B-47 and RB-47	125	12 mos.
KC-135	125	12 mos.
RC-135	125	12 mos.
KC-97	125	12 mos.
B-70	125	12 mos.
Missiles Forces, Land-based		
Atlas	50	12 mos.
Titan	50	12 mos.
Minuteman H&D	50	12 mos.
Minuteman Mob.	50	12 mos.
Thor	50	12 mos.
Jupiter	50	12 mos.
Missiles, Sea-based		
FBM submarines	60	12 mos.
Regulus submarines	60	12 mos.
Command, Control and Communication Headquarters and Command Support		

Chart 2. Breakdown of the packages.

A time schedule for submission of the programs was issued and all program packages were submitted on time. Together with his staff and the Joint Chiefs, the Secretary reviewed package summaries which presented key data in the principal decision areas and in mid-September issued guidance for FY 1963-FY 1967 in terms of forces and costs, together with explanatory notes and procurement lists, where appropriate.

Military departments are now into the third and most important phase—the translation of program decisions into the traditional budget format. One thing emphasized by Hitch is that the programming review is not intended as a substitute for the normal annual budget review. Rather, it is designed to be a DOD approved program base for the preparation of the annual budget, as well as guidance for future planning.

Hitch's office, working with the Joint Staff and the military departments, developed a standardized list of program packages and program elements. (See chart 1).

A "program element," an integrated activity, is a combination of men, equipment, and installations, whose effectiveness can be related to national security policy objectives. For example: such forces as B-52 wings, infantry battalions, and combatant ships, taken together with all the equipment, men, installations, supplies and support to make them effective military forces.

A "program package" is an interrelated group of program elements that must be considered together because they support each other or are close substitutes for each other. The Central War Offensive Forces is an example of such a package. The unifying principle of each package is a common mission or set of purposes for the elements involved.

Military Personnel
- *Active Forces*
- *Reserve Forces*
- *Retired Pay*

Operation and Maintenance

Procurement
- *Aircraft*
- *Missiles*
- *Ships*
- *Other*

Research, Development, Test, and Evaluation

Military Construction
- *Active Forces*
- *Reserve Forces*

Revolving and Management Funds

Military Assistance

Chart 3. The old setup.

Each specific item or activity which would meet the definition of a program element was identified and then organized into large related groups, and finally into program packages related to the major military missions.

For example, on chart 2 are listed the program elements included in the Central War Offensive Forces program package. They are divided into a number of general categories, i.e., aircraft forces; land-based missile forces; sea-based missile forces; command, control, and communication systems; and headquarters and command support.

Under the old budget setup, money is appropriated by different categories, i.e., military personnel, operation and maintenance, etc. (See chart 3). Congress appropriates funds for each division restricting military managers to planning for just one year.

Because Defense has a new budget program, it is no indication that the present appropriation structure will change. Congress will continue to appropriate in the same manner but will have a better knowledge of what the money will buy over the related period of time.

Most top planners in the military believe that Congress should use the Defense system to make their appropriations, but as one budgeteer put it: "there is no logic behind present appropriations. No rhyme or reason. The Defense activities are no different than the programs. You should organize the way you budget—by mission. Under the present program, we follow these three steps: (1) organization, (2) program and (3) budget. We do not intend to reorganize the present budget appropriation structure. No other nation has ever attempted to budget any other way. Besides, who would dare tell Congress that they have to change their way of appropriating money."

"There has to be continuity between programs and organization," according to another budget expert. "Money must flow in accordance with the management. To have control of the program, managers must have control of the money. It is a well known fact that the man who controls the money controls the program."

In essence, if Congress appropriated by program instead of the present system, it would mean funds would go from appropriation to program, instead of from appropriation to military comptroller to program. This would also eliminate keeping two sets of books—one for budget appropriations and the other for programs.

This portion, referring to the old budget process, was taken from Hitch's testimony before the Subcommittee on

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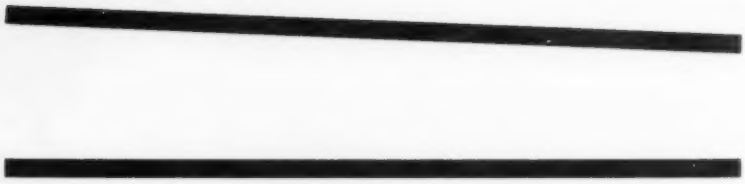

parallel lines

Non-Euclidean geometries have upset many apple-carts, including the widely held and "basic" belief that parallel lines never meet. In geodesics and spheres they do meet.

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AWARDS BY STATUTORY AUTHORITY (By Fiscal Year) a/

Statutory Authority (10 U.S.C. 2304 (a))	Net Value ($ 000)								Number of Procurement Actions b/							
	FY 1958		FY 1959		FY 1960		FY 1961		FY 1958		FY 1959		FY 1960		FY 1961	
	Amount	%	Amount	%	Amount	%	Amount	%	Number	%	Number	%	Number	%	Number	%
TOTAL	$24,196,977		$25,312,065		$23,688,533		$25,584,380		5,131,704		6,698,897		7,061,095		7,496,504	
INTRAGOVERNMENTAL	531,179		758,347		780,875		880,980		673,509		847,430		954,861		1,001,806	
TOTAL, EXCEPT INTRAGOVERNMENTAL	23,665,798	100.0%	24,553,718	100.0%	22,907,658	100.0%	24,703,400	100.0%	4,458,195	100.0%	5,851,467	100.0%	6,106,234	100.0%	6,494,698	100.0%
FORMALLY ADVERTISED	3,281,856	13.9	3,255,682	13.3	3,169,521	13.8	2,931,711	11.9	275,041	6.2	283,220	4.8	273,256	4.5	262,338	4.0
OTHER AUTHORITY (SUB-TOTAL) b/	20,383,942	86.1	21,298,036	86.7	19,738,137	86.2	21,771,689	88.1	4,183,154	93.8	5,568,247	95.2	5,832,978	95.5	6,232,360	96.0
(1) National Emergency (Sub-Total)	1,252,494	5.3	473,606	1.9	419,861	1.8	374,915	1.5	25,921	0.5	24,930	0.4	28,818	0.5	19,924	0.3
(a) Labor Surplus Area & Industry Set-Aside	35,328	0.2	121,496	0.5	37,342	0.2	66,670	0.3	830	*	2,362	*	1,395	*	1,416	*
(b) Small Business Set-Aside (Unilateral)	196,895	0.8	61,280	0.3	60,391	0.3	58,715	0.2	9,715	0.2	9,659	0.2	14,019	0.3	8,190	0.1
(c) Disaster Area Set-Aside c/	12	*	0	0.0	0	0.0	0	0.0	3	*	0	0.0	0	0.0	-	0.0
(d) Experimental, Developmental, Test or Research Not More Than $100,000	224,651	0.9	250,090	1.0	289,805	1.2	291,050	1.2	9,946	0.2	11,248	0.2	12,752	0.2	9,906	0.2
(e) Modifications Authorized by Existing Contract Negotiated Prior to January 1, 1956	794,628	3.4	40,750	0.1	32,323	0.1	(-)41,520	(-)0.2	5,427	0.1	1,761	*	652	*	410	*
(2) Public Exigency	105,652	0.4	199,218	0.8	143,924	0.6	126,194	0.5	4,844	0.1	7,832	0.2	10,310	0.2	7,809	0.1
(3) Purchases Not More Than $2,500 d/	602,112	2.5	769,323	3.1	825,287	3.6	918,717	3.7	3,698,668	82.1	4,830,313	82.6	5,040,654	82.5	5,363,785	82.7
(4) Personal or Professional Services	58,759	0.3	81,665	0.3	58,563	0.3	87,875	0.3	5,301	0.1	6,877	0.1	4,168	0.1	5,859	0.1
(5) Services of Educational Institutions	311,040	1.3	335,818	1.4	298,645	1.3	309,508	1.3	6,733	0.2	6,805	0.1	6,768	0.1	8,118	0.1
(6) Purchases Outside U. S.	1,169,689	4.9	1,117,228	4.6	940,321	4.1	1,014,195	4.1	296,339	6.6	498,131	8.4	536,999	8.8	595,782	9.2
(7) Medicines or Medical Supplies	16,821	0.1	33,959	0.1	53,228	0.2	42,535	0.2	1,320	*	1,538	*	2,550	*	2,551	*
(8) Supplies Purchased for Authorized Resale	115,446	0.5	128,555	0.5	135,966	0.6	122,464	0.5	32,041	0.7	29,385	0.5	27,799	0.5	27,708	0.4
(9) Perishable or Non-Perishable Subsistence e/	492,258	2.1	480,096	2.0	441,764	1.9	436,103	1.8	52,068	1.2	44,432	0.8	39,727	0.7	37,698	0.6
(10) Impractical to Secure Competition by Formal Advertising	3,644,404	15.4	3,966,992	16.2	3,323,628	14.5	3,512,508	14.2	79,573	1.8	90,667	1.6	96,395	1.6	106,694	1.6
(11) Experimental, Developmental, Test or Research	2,961,266	12.5	4,027,675	16.4	4,390,450	19.2	4,987,733	20.2	3,799	0.1	4,288	0.1	5,433	0.1	4,911	0.1
(12) Classified Purchases	315,018	1.3	630,148	2.6	964,087	4.2	1,259,383	5.1	1,290	*	1,455	*	1,254	*	1,430	*
(13) Technical Equipment Requiring Standardization and Interchangeability of Parts	9,843	*	12,897	*	36,014	0.2	29,674	0.1	270	*	389	*	318	*	380	*
(14) Technical or Specialized Supplies Requiring Substantial Investment or Extended Period of Preparation for Manufacture	7,439,560	31.5	7,022,201	28.6	6,034,420	26.4	6,991,945	28.3	4,873	0.1	6,808	0.1	8,947	0.1	11,555	0.2
(15) Negotiation After Advertising	1,006	*	2,268	*	75	*	8,631	*	49	*	19	*	10	*	36	*
(16) Purchases to Keep Facilities Available in the Interest of National Defense or Industrial Mobilization	1,442,136	6.1	1,345,573	5.5	973,761	4.2	671,262	2.7	2,061	0.1	2,300	*	2,063	*	1,575	*
(17) Otherwise Authorized by Law	446,436	1.9	670,814	2.7	696,145	3.1	878,047	3.6	7,464	0.2	18,078	0.3	20,765	0.3	36,349	0.6

a/ For definitions and coverage, see Notes on Coverage.
b/ An action may award, terminate or otherwise change a prime contract.
c/ No disaster areas were designated by the President for procurement purposes after Fiscal Year 1956. Figures shown relate to modifications of contracts awarded in Fiscal Year 1956.
d/ Prior to passage of Public Law 85-800 (August 28, 1958) Authority 3 applied only to procurement actions of not more than $1,000, and actions of $1,000 - $2,500 were included as a part of Authority 1. For comparative purposes, all actions of $2,500 or less are shown under Authority 3.
e/ Prior to passage of Public Law 85-800 (August 28, 1958) Authority 9 applied only to procurement of perishable subsistence. Prior to this time procurement of non-perishable subsistence was included as a part of Authority 1. For comparative purposes all perishable and non-perishable subsistence procurement actions are shown under Authority 9.
* Less than 0.05 percent.

National Policy Machinery of the Senate Committee on Government Operations:

"First I want to make clear that we are not starting this task from scratch. No one who has studied the budgetary process as it existed in the War and Navy Departments at the end of World War II can help but be impressed by the tremendous progress achieved since that time. Just one example: as late as fiscal year 1948, the Navy Department had to manage its financial affairs through some 136 separate accounts, each of which had to be separately considered and appropriated for by the Congress. They ranged in size from $50 for the payment of certain claims to $1-billion and 294-million for pay and subsistence of Naval Personnel. The War Department budget was similar. Although the major appropriations paralleled the organization of the two departments, they did not follow any functional pattern whatsoever. Furthermore, a large number of the appropriation accounts were for minor and obscure purposes which merely represented the accretions of some 150 years of history.

"Since then the Defense budget structure has been greatly simplified and rationalized under five principal titles—Military Personnel; Operation and Maintenance; Procurement; Research, Development, Test, and Evaluation; and Military Construction. The number of appropriation accounts has been greatly reduced. We are now asking for new appropriations in only thirteen accounts each for the Army, Navy, and Air Force.

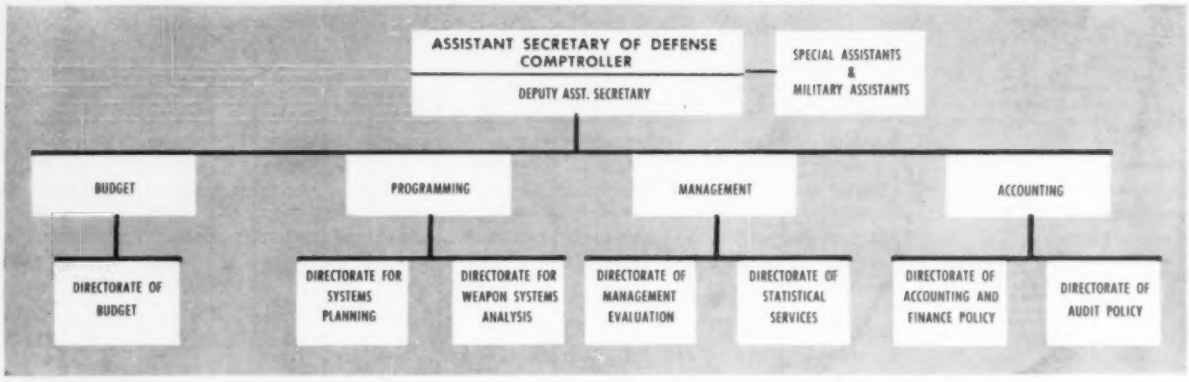
Necessary Reforms

"Comptroller organizations have been established throughout the Defense Department. Basic patterns have been developed for budget program and activity accounts. Progress has been made in achieving cost-based budgets. Institutional arrangements designed to promote efficiency and economy, such as consumer funding and the use of stock and industrial funds, have been established. Financial accounting for materiel inventories is now standard in all the Services and much else has been accomplished. For these notable achievements, we have to thank my distinguished predecessor, Mr. W. J. McNeil, the first Comptroller of the Department of Defense. He was the principal architect of these numerous reforms.

"All these reforms are useful and necessary, and we plan to retain them and improve upon them. But there is one area in which we believe we have to add significantly to what we already have.

"The revolution in military technology since the end of World War II, or even since the end of the Korean War, has had a profound effect on the character of the military program. The great technical complexity of modern-day weapons, their lengthy period of development, their tremendous combat power, and their enormous cost have placed an extraordinary premium on the sound choice of major weapon systems in relation to tasks and missions and our natural security objectives. These choices have become, for the top management of the Defense Department, the key decisions around which much of the Defense program revolves.

"Yet, it is precisely in this area that the financial management system showed its greatest weakness. It did not facilitate the relating of costs to weapon systems, tasks, and missions. Its time horizon was too limited. It did not disclose the full time-phased costs of proposed programs. And it did not provide the data needed to assess properly the cost and effectiveness of alternative programs. As General Taylor pointed out to this Committee last year:



'In spite of the fact that modern war is no longer fought in terms of a separate Army, Navy, and Air Force, nonetheless we still budget vertically in these service terms. Yet, if we are called upon to fight, we will not be interested in the services as such. We will be interested rather in task forces, these combinations of Army, Navy, and Air Force which are functional in nature, such as the atomic retaliatory forces, overseas deployments, continental air defense forces, limited war expeditionary forces, and the like. But the point is that we do not keep our budget in these terms. Hence it is not an exaggeration to say that we do not know what kind and how much defense we are buying with any specific budget.

'This kind of budgeting makes it hard to determine what our military posture will be at any given time in the future.'

"Admittedly, the financial management system must serve many other purposes. Certainly it must produce a budget in a form acceptable to the Congress. It must account for funds in the same manner in which they are appropriated. It must provide to managers at all levels in the Defense establishment the financial information they need to do their particular jobs in an efficient and economical manner. It must produce the financial information required by other agencies of the Government—the Bureau of the Budget, the Treasury, and the General Accounting Office.

Problems Ahead

"But all this is not enough. The financial management system must also be made to provide the data needed by top Defense management to make the really crucial decisions, particularly on the major forces and weapon systems needed to carry out the principal missions of the Defense establishment. These decisions cannot be made rationally without an adequate knowledge of the available alternatives, in terms of their military worth in relation to their cost. Because of the long life cycle of major weapon systems, the cost of the systems must be projected over a period of years, ideally over their entire life span. Only in this way can the full cost implications, present and future, of program decisions be appreciated. And, finally, the entire system must be oriented to provide top management with essential data in terms of programs, since it is in terms of programs that major decisions have to be made."

On paper Hitch's new program looks great. However, according to Deputy Assistant Secretary (Comptroller) for Programming, Hugh McCullough, "the Secretary recognizes that in these fast-moving times we should not freeze our objectives. Therefore, our programs are 'tentative approvals.' We must maintain the flexibility to adjust programs in response to changes in the international situation, in technology and in requirements."

Here are some of the goals, and in some cases problems, that are ahead for Hitch and crew:

(1) Maintaining flexibility. The programs are set up to fit the situation at hand. Any change will affect the complete program package.

(2) The great burden placed upon the people working on the programs. In most cases, it will mean keeping two separate accounts, i.e., figures for Congress and then figures for program packages.

(3) Costs must be related to the military capability to be achieved. Costs must be related to effectiveness at various levels of effort. Alternate possibilities must be considered and choices made among them not in terms of cost alone or effectiveness alone, but in terms of both together.

(4) Research and development. The level of world affairs determines how much or how little. In some cases there will be too much of a program.

(5) General purpose and service-wide support. This would encompass redefining elements to the decision-making purpose.

(6) Last but not least, making sure that everything is covered. Checking to see that everything was covered, yet nothing has been duplicated.

Although every new program has its problems, once the program packaging system goes into effect, it is hoped that it will provide program execution and follow-up—or what McCullough refers to as "closing the loop." "The Secretary wants to manage program elements, particularly the major weapon systems, in terms of programs rather than simply in budget terms. He wants to know how the programs are progressing both in physical and financial terms . . . Close working relationships have been reached with the Military departments and by the first of January we expect to have the framework for this information system—a 'road map' of the future for specific upgrading of our entire effort."

Computer Improvements

For monitoring purposes, a "work room" (also referred to as monitoring center or program room) for top officials has been set up in the Pentagon which will present three levels of data simultaneously. All information is put on view graphs and can be projected on huge floor-to-ceiling screens at any time. The system is set up to allow managers to make changes on the projected figures, and to see what affect it will have on the overall program package. It is here that the use of computers will play their biggest part. Although the only computers in use now are a series of cost models, it is intended to set up a large computer factory once the system has gotten to the point of nearly wrinkle-free operation.

It is during this part of the operation that budget planners hope to some day be able to incorporate PERT (Program Evaluation and Review Techniques) into the budget plan. However, McCullough does not believe the budget is ready for PERT, or by the

same token, PERT is ready for the budget. "As improvements to these control techniques come to fruition, the project managers will have better control of their programs. Their 'outputs' will undoubtedly the most valuable to a DOD information system."

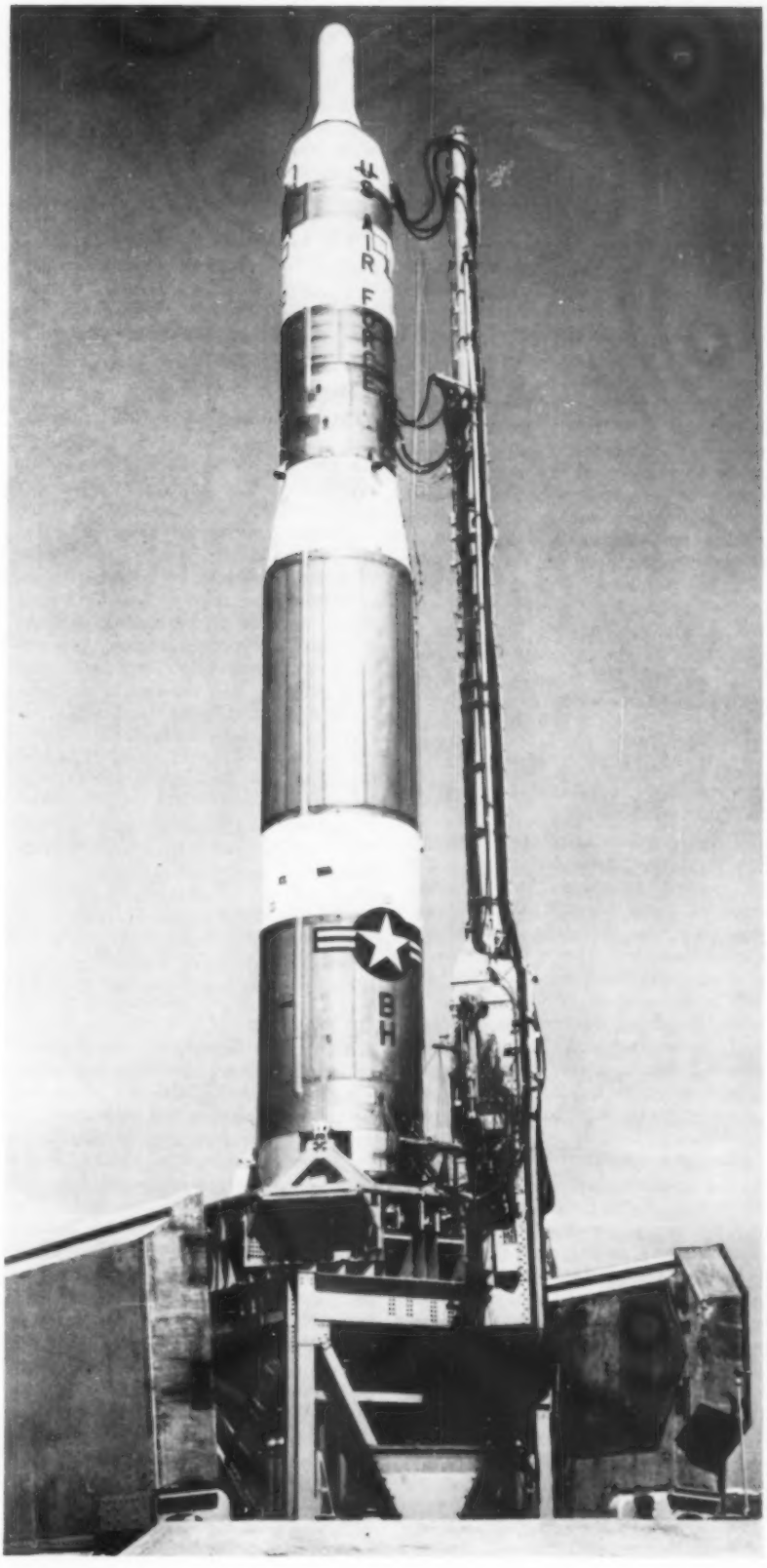
Although there is little or no doubt that further changes to the program package list will occur, it will be a continuing task of adjusting the list to reflect changes in the forces and programs, as well as in plans, concepts, and organization.

The first and second phases of the process (requirements and programming phases) will, after this year, be continued on a year-round basis. Now that initial formulations of requirements and programs have been completed, reviewed, and tentatively approved by McNamara, the continuing effort will be concentrated on program revisions to take account of changing conditions, new developments, and new requirements. As each year passes, program and requirement projections will be made for another year, allowing Defense to keep at least five years beyond the current budget year. This will mean Defense having, at all times, a tentatively approved program, fully costed, and projected at least five years into the future, to serve as a planning guide to the entire establishment.

Will Eliminate Rush

Once the system goes into full operation, budgeteers hope to be able to draw up quickly in the fall of each year a detailed Defense budget, using the first year increment of the approved programs, together with other policy guidance, as the basis. This should eliminate the last minute rush for program review while in the midst of the annual budget review. The basic ground work will have already been laid, necessitating only a final check and some last minute adjustments. Understandably, this will provide for a more orderly and thorough budget preparation, and provide time for a careful scrutiny of program detail, shopping lists, production schedules, lead times, activity rates (flying time, steaming hours), personnel grade structures, cost estimates, status of funding, and all of the myriad things involved in the preparation of a Defense budget.

According to Hitch, the culling out of programs, obviously, should be done in the research and development stage, before heavy investments are made in committing the system to production. That is one of the reasons why the R&D has been separated from the in-



Missiles, like the two-stage Titan above, in a crash program gave rise to concurrency development which, in turn, first made validity of program package approach clear.

vestment category—so that Defense planners can plainly see the costs involved in a decision to produce and deploy a weapon system as contrasted with the cost of its development.

Hitch also believes that the operating costs should be clearly identified and estimated years in advance. All too often these costs are overlooked when decisions are made on weapon systems; and they can be substantial.

Example: The cost of operating a B-52 wing for five years is roughly equivalent to its investment cost—about $500-million in each case. The ratio of operating to investment costs varies widely from system to system.

What the whole system boils down to, according to Hitch's testimony before the Subcommittee on National Policy Machinery, is simply: "Our objective is to develop an integrated reporting system which will provide reliable cost and and program data in terms of the program elements and packages. While we do not expect the accounting system to provide all the cost information directly in terms of programs, we do expect it to furnish the basis for good statistical cost estimating and for after-the-fact checking on the estimates. Financial reporting of obligations and expenditures by appropriation account will of course be continued as an essential part of the financial management system.

"Further, we want the new information reporting system to give us the data needed to assess properly the progress and status of each of these program elements in relation to the approved program. This will enable us to match performance against plans, both in physical terms and in financial terms. For the first time, the Secretary of Defense will have an integrated financial management system specifically oriented to the manner in which he has to make decisions—by program in relation to military mission.

"I have outlined the improvements in the planning-programming-budgeting process of the Defense Department that we are trying to achieve. These improvements, of themselves, will not make the hard decisions easy, nor will they make simple the complex problem of formulating national defense policy. What they will do, we hope, is facilitate the rational analysis of national security problems. They will make us aware of the full cost implications of the choices we make. They will permit us, in shorter time and with greater accuracy, to cost out the various policy alternatives presented to the National Security Council for its consideration. I feel very strongly that whether one is choosing among particular items of equipment or among various policy proposals, it is extremely useful to array explicitly the alternatives and their respective costs and effectiveness. The procedures we are developing will promote this way of looking at Defense problems, this way of deciding how best to defend the security of the United States."

Breakdown

The Comptroller's shop employs 135 professional civilians, 65 clerical and three professional military advisors to round out a staff of 203 members. The rest of the shop works something like this:

Budget Shop

Supervise and direct the preparation and execution of the budget of the Department of Defense, including establishment of budget systems and procedures.

Budget directorate—takes in analysis, review and the making of recommendations on military plans, budgets, apportionment request and cost estimates regarding: personnel, military construction, special projects, procurement and production, operation and maintenance, and research and development. Also analyzes fiscal and financial data to ascertain financial requirements and progress in terms of obligation and expenditure rates in DOD appropriations.

Prepares and continuously reviews the estimates of obligations, expenditures, and estimates of annual carryover for all funds appropriated to DOD; also fiscal reports, special financial statements, charts and graphs required in support of budget presentations, studies and economic analyses.

Programming

This office is assigned the responsibilities of creating, directing and supervising a Defense Capability (short and long-range) for effecting analyses of resource requirements or allocations in such terms as to make it possible for management to make sound policy and managerial determinations concerning preferred means, methods and devices of warfare, including arms limitation.

Systems planning directorate—develops concepts for and implements a comprehensive approach to: development of valid units of measure for the use of materiel, manpower and other resources; translation of resource requirements into financial or other quantitative and qualitative terms; integration of such means into a system for use by all functional areas of DOD management.

Weapons systems analysis directorate—provides capability for meaningful analysis of resource requirements and data needed to make policy and management decisions pending the completion of a comprehensive and integrated system for this purpose. Also identifies relevant sources of weapons systems data and information throughout DOD; adapts such data so as to effect: their use, to the extent possible, to the analysis of resource requirements, their efficient use for evaluation of weapon systems or other meaningful aggregations; conducts or supervises the conduct of general and specific analyses of resource requirements and data for weapon systems.

Management

Does evaluations of DOD policies, programs, procedures and operations at both departmental and field levels; contract pricing, financing and performance evaluation; progress and statistical reporting for all OSD areas; evaluation, development and promulgation of financial policies and procedures pertaining to international matters, utilization of currencies in foreign areas, foreign currency exchange rates and foreign military programs in relation to U.S. programs; coordination of development of DOD views on GAO reports; audit of Military Assistance Program.

Management evaluation directorate—basically the same as for Management Office except for coordination of development of DOD views on GAO reports, including comments to the Comptroller General and BOB.

Statistical services directorate—directs and coordinates the activities of the five Divisions; maintains liaison with ASD (Comptroller) Divisions, other OASD's and staff offices, the Offices of the Secretary of Defense and Deputy Secretary of Defense, military departments and Services, members of Congress.

Accounting

Concerned primarily with the establishment of financial management policies, systems and procedures for the Department of Defense.

Accounting and finance policy directorate—develops and establishes accounting and finance policies, systems and procedures, including funding and financial reporting, uniform terminology and classifications; maintains liaison with other agencies in such matters.

Audit policy directorate—audits plans and policies in connection with: contract auditing and internal auditing; analyze, evaluate and coordinate audit organizations, programs and reports of the DOD, including the military departments; participate with ASD (I&L) in development of procurement regulations having audit or contract costing implications; provides liaison with other Government agencies and outside organizations in audit matters. ■

Installations & Logistics

Thomas D. Morris

"It's easy, in this fishbowl, to give people the wrong impression. In about a year, we'll have enough hard facts to be able to 'point with pride.'" This is where they are likely to come from . . .

What's Ahead in Installations & Logistics

THOMAS D. MORRIS, Assistant Secretary of Defense for Installations and Logistics, is no stranger to the Washington arena.

When summoned to his present job in January, he had served almost a year as Budget Bureau assistant director for management and organization. In 1956-57, he worked for his predecessor as the I&L chief, Perkins McQuire, in various positions including the deputy slot.

He picked up some more background on the ins and outs of the Pentagon puzzle palace by taking part in the studies of both Hoover Commissions, conducted management surveys for a number of Federal agencies.

With all that behind him, he is understandably cautious about blowing the I&L horn just yet. "It's easy to talk big about the things we have going, but in this fishbowl we live in, it's also easy to give people the wrong impression. But in about a year we should have enough hard facts behind us so we may be able to 'point with pride'."

Where Credit Due

Like nearly all other Pentagon veterans, he gives McNamara's leadership the major credit for 1961's progress. "Basically, it's just this simple: what others have talked about doing, for years, he's getting done. He is showing what good management can do—which ought to give a lift to everybody around here."

But this drive has put Morris right in the midst of the firing. His mission came, in effect, from McNamara during testimony before the Senate Appropriations Committee: "This substantial increase in the Defense budget underscores the need for further efforts to eliminate waste and duplication within the Defense establishment. We have no intention of using the present (Berlin) crisis as an excuse for easing up on our drive to eliminate facilities excess to our needs, to improve procurement methods and to effect other economies and improvements in our day-to-day activities."

The philosophy behind that statement resulted in Morris running himself and his whole staff through a rough, soul-searching operation during the first few months of this year, coming up with a lot of questions, some answers. Recently, he ticked off a few of both:

1—"It is our duty to dramatize the fact that every man—military or civilian—employed on an unnecessary task is depriving us of the ability to perform an important task elsewhere; that unnecessary quantities or the wrong types of equipment and supplies tie up space in our transportation system, warehouses and ports which is costly in peacetime and may reduce our military capability in times of emergency; and that every unnecessary dollar spent in the procurement of goods and services, or in keeping unneeded facilities in operation, is depriving us of resources needed to modernize our weapons and inventories."

2—"The exploding technology of recent years, bringing with it a flood of new weapons and components, has outmoded the logistics techniques and systems which were satisfactory just a few years ago. Today we are faced with the problems of picking up the pieces, reorganizing our logistics programs to keep pace, and applying some of this new technology to obtaining breakthroughs in logistics management.

Here are some of the activity details:

Long Hours

Like every other dusty nook in the Pentagon, I&L has felt the McNamara whirlwind. For the first handful of months they were working almost around the clock in order to keep up.

"Tom Morris seems to thrive on this sort of thing," said one of his aides, "but I was beginning to get a little tired. Fortunately, we've now levelled off to a standard 12 hours a day with most of our Sundays free."

As with other Defense top management offices, programs to solve problems in I&L have created their own distinctive sets of problems—mostly of an implementing nature. Among the more notable highlights in I&L, office by office are:

• Base Closure Program

The economic advisor's office (see organization chart) is almost a blueprint of the new Defense administration's way of doing business.

The small new office manned by persons with authority is solving an old problem and at the same time knocking down a hurdle which, until

McNamara, Washington veterans assumed couldn't be toppled.

The problem: how to cutback, or build up, any of the long list of military bases around the country in quick reaction to changes in military planning and support needs.

The answer: set up an office, put someone in charge, and *do* it—a move that had been recommended for a long time by Defense staff people but—and here's the difference in the McNamara team—McNamara listened to the advice, made a decision without any more hand-sitting and set up the organization, which is the first time any such thing has been done in Defense.

The hurdle: politics which has been accepted for years as the chief reason why it is easy to build or augment a base and well nigh impossible to shut it down. (Typical: within the past 12 months the Army finally shut down a mid-West military hospital it had been trying to close for the past five years—but couldn't because the Congressmen from the District just wouldn't stand for it.)

Nut of the whole problem, of course, is the local economic impact on bases being shutdown or cut back. President Kennedy, himself, launched this base closure program, asked McNamara to set up a Pentagon office whose job would be to find ways and means to lessen the impact on base personnel and communities where an installation for military reasons, had to be reduced or eliminated.

McNamara gave the office a second, far less publicized but equally important function: to develop studies on the planned procurement of major weapon systems and determine the economic impact, both nationally and by local area, of these planned changes and where Defense would do its hardware buying.

McNamara made two points very clear when the office went into business: (1) he has a very specific concern for what goes on here; (2) shutting down a base does not mean the Nation's Defense posture is being weakened. "In fact," said one officer in the program, "he emphasized that it strengthens national defense by wiping out the drain on resources (O&M funds, etc.) needed to operate bases which no longer have any more than a marginal military value."

Pump priming for what the office does comes from the Base Installations Offices of the separate services who recommend where they can cut back or need to build up. Proposal goes to I&L boss Tom Morris who consults with his service counterparts; he gets an agreement on the final list, receives an approval from McNamara to go ahead, sends the list down to his economic advisors office.

While the details and statistics on what this office does (in both this base closure program and its weapons systems procurements function) are highly classified, from here on out what it does at the bases is no secret.

The office does its own evaluation of that list of bases to see where it should concentrate, i.e., where a base closure program will have the most economic impact, "but like any doctor, we never refuse a patient." Translation: if the base or some Congressional representative asks that his people be given help, the office provides it.

Run as a joint effort with the three services, the OSD economic advisor's office works with other government agencies to find out if they can use the facility, have been fortunate here in being given virtually a blank check by the President to draw on any government office to accomplish their objective.

This cooperative effort starts at the top of the program where the committee—OSD, Army, Navy and Air Force—spend a great deal of their committee time trying to help solve each other's problems.

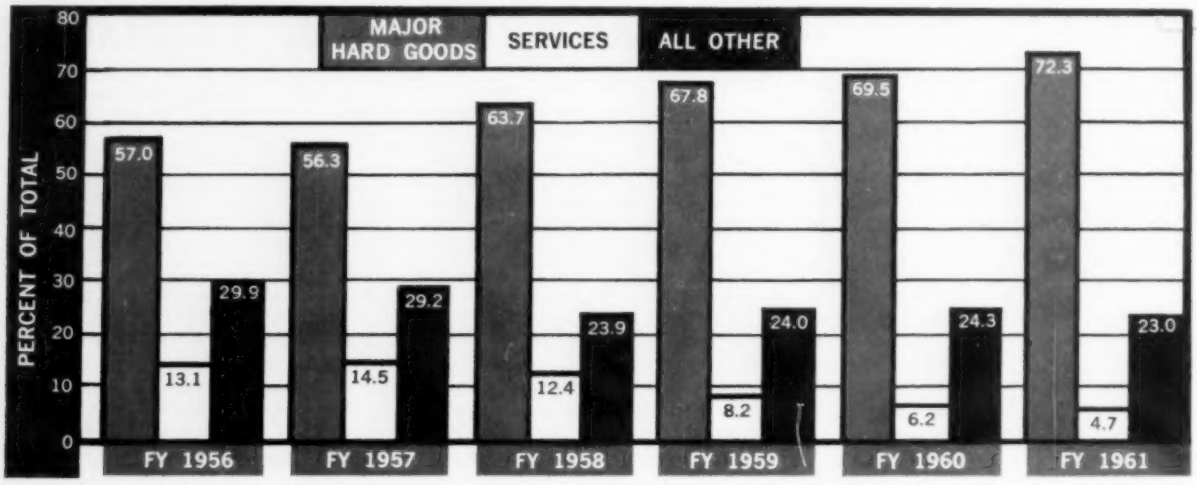
The major significance of all this activity is that Defense now recognizes officially and without question (by setting up the machinery to take care of it) the economic impact of Defense activities on the Nation.

Examples of how a little attention to a knotty problem can work wonders:

Phasing down the Army's Raritan Arsenal in New Jersey, the economic office worked with Army and GSA to transfer 180 acres to the local community by December of this year, has learned that planned industrial uses for the arsenal would increase local payrolls by five to ten times. The office was also eminently successful in its first closing attempt at Presque Isle, Maine. Working closely with local people they managed to: get Loring Air Force Base to use all the housing; interest local power companies in utilities; assign about 100 acres to the State of Maine for location of a vocational school; block out a tract for a new Presque Isle Community Junior High School; turn the airstrip over to the city; and to interest a mid-West manufacturer into the Snark hangars.

Though not attracting big black headlines, the office's two-step approach to the economic problem is getting significant results by: (1) taking an interest and, (2) working very closely with local community people.

Said one Air Force officer, "Most people will accept patriotically the military necessity if you make it clear



Breakdown of how Defense has been spending its money by major hardware categories for the past

that you're trying to help them, and assure them that they are still part of the national team rather than just clobbering them with an announcement. That latter technique is how we stirred up so much furor in the past."

Naturally, handling the political aspects of this program means the very careful walking of an extremely thin line. "We have to be careful we don't appear to be helping one political faction over another—not only at the national level but also at State and local levels. This can become pretty complex. For instance, in several cases where we plan a de-activitation, we've got local representatives from one party and a national Congressman from the other. To succeed we've got to make it very clear that our sole reason for going out there is to help local community as a whole to alleviate the economic impact resulting from these changes."

One accomplishment of this study was the recent directive to create a uniform training program. Said one OSD official: "While the services have been doing a solid training job for a long time separately, the problem has been just that—they were separate. They, and we, feel it is time we all started placing the same amount of emphasis on the same aspects of the procurement operation."

One additional step OSD is taking sets up machinery to establish a school to scrutinize the courses of training, and develop an elite corps of procurement people.

Among other activity highlights in procurement:

1. McNamara's decision to increase the amount of dollar outlay going to small business has applied additional pressures. Carrying out the order has become doubly difficult because the very nature of military hardware development these days is making it doubly difficult for small business to play a bigger role in the activity. In effect, I&L is being pulled in two directions at once: (1) toward big business by the very nature of new weapons systems developments, (2) toward small business by order of the Secretary. Result: tough decisions not yet made will make the already-bumpy small business road even more rocky in the months ahead.

2. The Procurement Policy Office is launching an across-the-board investigation into the possibilities for increasing competitive procurement. The attempt to force military procurement people to make more of the "greater risk" type of contracts, i.e., more profits for sharp company performance, greater losses for less-than-average success in producing. Meaning: Defense will insist on less and less use of cost plus fixed fee contracts.

The plan to bring this all to fruition involves completion of the current study on just what a "greater risk" contract must contain, then train procurement people on how to develop these higher risk (and higher incentive) contracts with greater precision.

Says McNamara, "We've got to get away from over reliance on CPFF."

Among the other depth studies: an analysis of spare parts procurement—particularly in the aircraft field—to come up with answers on how to achieve greater competition. This study is moving cautiously because it takes an engineering evaluation to make sure that the quality of spares bought from one manufacturer for an airplane built by another will be high enough so that operating efficiency won't be crippled. "But," said one official, "that doesn't mean we won't eventually come up with an answer because we know there are big dollar payoffs if we can substantially increase the competition in this procurement area."

The Armed Services Procurement Regulations Committee is one of only a handful of organizations in the Pentagon which have been changed little by what's going on on the third floor E-ring. Reason: the ASPER organization has always been a joint effort. "To work at all, ASPER needs a cooperative effort to resolve disagreements—but avoid compromises which might weaken the solution to the problem. The separate service members, through long experience, have become accustomed to taking tough decisions and living with them."

Procurement, at this writing, is still a little vague about how the Defense Supply Agency will affect them, "because DSA hasn't really been tied down yet. But it's quite likely we'll be add-

MAJOR HARD GOODS

FY	1956	1957	1958	1959	1960	1961
AIRCRAFT	32.6	26.2	33.9	28.5	22.5	21.5
MISSILE SYSTEMS	5.6	9.8	13.0	19.7	23.4	25.6
SHIPS	4.4	4.8	3.0	4.8	4.7	6.0
AMMUNITION	2.1	1.9	2.3	1.5	1.9	2.5
WEAPONS	1.2	1.4	1.0	0.8	0.6	0.6
TANK-AUTOMOTIVE	2.1	2.3	1.4	1.6	2.2	2.4
ELECTRONICS AND COMMUNICATIONS EQUIPMENT	9.0	9.9	9.1	10.9	14.2	13.7

ALL OTHER

FY	1956	1957	1958	1959	1960	1961
SUBSISTENCE	2.5	2.7	2.1	2.2	2.2	2.0
TEXTILE, CLOTHING & EQUIPAGE	1.0	1.7	1.1	0.8	0.8	1.1
FUELS & LUBRICANTS	4.9	5.0	4.0	4.3	4.0	3.6
MICS. HARD GOODS	7.3	4.6	3.7	3.9	4.4	3.9
CONSTRUCTION	7.3	8.5	7.0	6.2	5.7	5.2
ALL ACTIONS OF LESS THAN $10,000	6.9	6.7	6.0	6.6	7.2	7.2

few years. Figures are percents of total new money procurement.

• Procurement

The tempo of activity has stepped up in this key office, as with every other spot in the Pentagon. Major changes, however, have been intangible.

"We have known for a long time that we were responsible for procurement *policy*. But McNamara has made it pretty clear that he is holding Morris responsible for *procurement*, particularly the management of the buying operation."

A great deal of effort is now being devoted to setting up communications channels to get feedback on how well the procurement policy office is doing. Under OSD leadership, and with what I&L terms "very good" service cooperation, Morris has set up a study group attempting to establish a unified review of procurement performance and lay down uniform standards.

NOT BY ARMED FORCES MANAGEMENT

IN THE SPECIAL JOINT-CHIEFS-OF-STAFF-ISSUE

Does McNamara bypass the JCS staff in making decisions? Is Maxwell Taylor's appointment as Kennedy's personal military advisor a threat to the Staff's functions and powers?

These issues have ignited a major Pentagon controversy. Traditionally the Joint-Chiefs-of-Staff have been the "Brain Trust" in military affairs, advising the President and Secretary of Defense on military policy. Now the Staff feels they are not being consulted in many major policy decisions.

Armed Forces Management intends to investigate both sides of the story to determine what ramifications the controversy is having on the Pentagon and National Military Policy.

JCS ISSUE EDITORIAL CONTENTS

AFM will tell you what is involved in the current controversy. Interviews with the five Chiefs-of-Staff will tell you how they view their present role and functions, and what they feel will be the Staff's future.

They will be asked: *What they consider their major problems.*
Is Defense Secretary McNamara bypassing them in making policy decisions?
Does Kennedy's appointment of Maxwell Taylor as his personal military advisor, in effect, create a super-chief on military affairs?

The other side of the story: *An interview with Maxwell Taylor to discuss what he thinks about his role in military affairs. Is he, in fact, a threat to the Joint-Chiefs-of-Staff? Defense Secretary McNamara will be asked how he feels about the Staff's charges.*

AFM will not stop there: *Former chiefs of staff will be asked to analyze and evaluate the role, power, usefulness and effectiveness of the Staff, historically and presently.*

The trend toward unification: *Is a single Chief the answer to the need for faster policy decisions? McNamara supports single management control in many areas. Does he want it here?*

ISSUE VALUE:

The subject's importance, the issue's timeliness, and the reader interest this issue will generate among AFM's 20,000 plus readers, make the Joint-Chiefs-of-Staff issue one of the best buys of the 1962 selling season.

DON'T BYPASS ARMED FORCES MANAGEMENT'S JOINT-CHIEFS-OF-STAFF-ISSUE

Publishing Date: January 1962
Closing Date: December 10, 1961

ing members to the ASPER Committee."

• Supply Management

As might be expected, the Supply Management Office has concentrated a big share of its recent effort on developing the whole single manager concept. Supply Management Policy Office director Paul Riley, for instance, was one of the key members of the Project 100 Study which resulted in DSA. Their conclusion, basically, revolved around one word—uniformity.

Sums up Riley, "To be effective, any reorganization in the single manager activity must be built around establishing uniform procedures as a start. Only by consolidating commodity handling operations at the working level can any reorganization provide a sound basis for common supply operations."

While the details of uniform procedures are not completely solved yet, supply people have gotten an agreement on uniform priority and requisition systems (see September AFM, page 19). Result: 16 different systems have been cut down to two, one for requisitioning and one for shipping invoices.

Says Riley about the job ahead, "After all, if you've got eight different single managers buying such things as trousers one way, beans another and auto parts a third, life for a procurement officer can become pretty complicated." Play that against 3.7-million catalog items in the Defense pipeline besides the thousands of little purchase items which Defense doesn't catalog and you get some idea of the task ahead of the supply people.

Other Headaches

Nor is standardization in procedures the only headache supply management has to ease.

Among the others:

1. Monitoring the Armed Forces Supply Support Center which is gaining momentum in a service disposal program that has already reached $3-billion a year, could reach $7-billion in three years.

2. Supply has been ordered, in effect, to "charge" into an analysis of the coordinated procurement assignment area, is already monitoring a material utilization that runs $2-billion a year, i.e., items in excess or long supply in one service are cross-fed to another service with a shortage—rather than letting the latter go out and buy new stocks. Riley feels that with some concentrated attention that $2-billion a year level can climb considerably higher, particularly in technical (especially aviation) parts. In this respect, he is encouraged even more by the strong boost given to the single manager concept in the last eight months. "This material utilization will solve itself in a single manager operation because what makes work, which is what single management provides, is communications and the exchange of more and better information."

3. In transportation, the directorate is currently comparing and evaluating sealift versus airlift requirements of the services examining such other things as the movement of household goods —a $200-million business in highly competitive industry.

Competition

"Here," says Riley, "you have to make sure that whatever policy changes are made don't destroy this competition." As for storage space, which falls in this same general area, review is almost constant, making sure that facilities are being put to their best use, that supply people are operating under the most modern warehousing techniques. One outcome already on the record: in the last three years we've closed down 37 million square feet of unneeded storage space, have programmed the closing of another 41 million by 1965.

4. Petroleum products monitoring, like a great many other things done by Riley's shop, are all wrapped up in single management. Currently, the Military Petroleum Supply Agency buys all petroleum products, both bulk and packaged, coordinates with the Military Sea Transport Service on distribution. Among the most recent progress: deciding recently to assign *management* of wholesale packaged petroleum products to MPSA, moving Army and Navy control points for the handling of purchased petroleum products into the same building with MPSA to ease the coordination problem, checking down into the possible advantages of moving the Air Force petroleum control operation at Middletown down to the same office.

5. Communications has long been accepted as one of the key elements of Defense activity. And Riley's people are in the act here too, overseeing the activities of the now powerful Defense Communications Agency. Riley's job: make sure the agency operates efficiently, comes up with the answer to its primary assignment—developing a single survivable communications net.

But Riley's telecommunications office goes beyond that, reviews service requirements for equipment. On any purchase, whether a single piece of hardware or a system that will cost in excess of $1-million, if the telecommunications people don't approve of the idea, the comptroller won't fund it.

In sum, Riley's operation amounts to giving Tom Morris, in particularly the single manager supply area, a capability (to back up his responsibility) to see that these groups are properly organized, functioning efficiently. And the job will grow more important in coming months. Experts are already predicting that eight single manager operations now going will have eight more added to them before the single manager approach to logistics has run its course.)

"It's an old challenge around here really. The Secretary can't do a good policy job unless he understands the operating problems. And he can't gain the understanding unless he has a capability to reach down and review operations in the field with authority. This is what we intend to provide. The pitfall we have to watch, of course, is that we don't reach down into the operating organization so much that we become an impediment."

• Maintenance

Easily one of the Pentagon's biggest problems, maintenance annually soaks up 20% of the Defense budget, requires 650,000 military personnel to operate, absorbs over 196,000 civilian man years annually.

In Sum

Sums up maintenance overseer, James Davis: "All this is the measure, by resources, of the effects of wear, corrosion, weathering, shock, careless operation and the vagaries of design and an occasional slip in production and inspection. And now that our weapons have grown in sophistication, their maintenance is becoming a shadow of serious proportions."

What Defense is doing about that shadow will have strong repercussions in the months ahead, not only on military activities but those of industry as well.

By bits and pieces, here and there, maintenance people have been brought in, in recent months, at the design phase of any weapon development. Reliability and maintainability are cropping up in design studies more and more frequently of late.

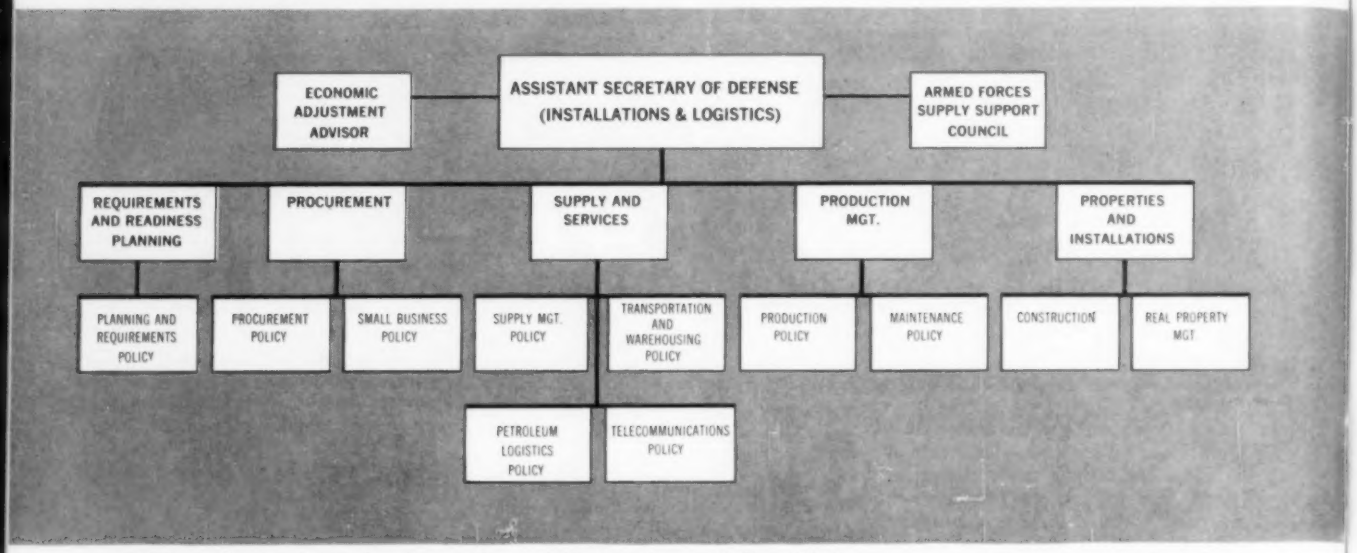
Examples: Boeing Company recently told its people maintainability will be given equal status with design; Bell Aerosystems (where Davis worked until McNamara called him to the Pentagon) has a "small, bushy-tailed group whose motto is 'no special tools.'" Widely publicized within the Bell organization, they have become an engineer's gadfly, have won their case 75% of the time on over 180 recommendations made, since they were set up, to change a design and thereby cut the probable maintenance cost. "It's an

extremely cheap investment," says Davis, "and the payoff is potentially tremendous."

Many top commanders at the tech service, bureau and hardware-producing command levels have recently launched an internal campaign to emphasize this subject. (Best attention getter has been Rear Admiral Paul D. Stroop, head of the Bureau of Weapons, who labelled his campaign Project KISS which, contrary to what a great many of his people first thought, actually stands for "Keep It Simple, Stupid."

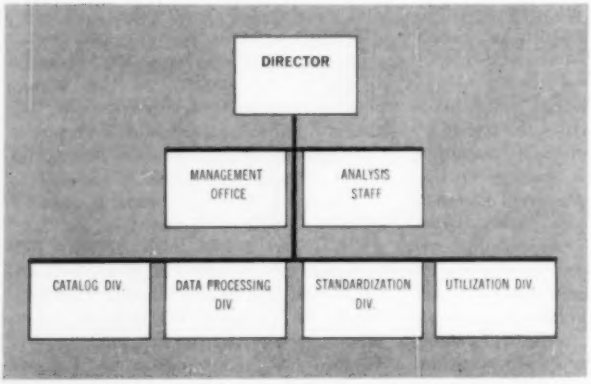
But Davis has chosen a different route to get results. Currently checking Defense industry nationwide to see just how much emphasis they are giving to maintenance, Davis hopes eventually to drive his regulations into the ASPR. The investigation alone will be no mean accomplishment because it must be worked in with the rest of a growing list of responsibilities his office now handles. Among the highlights:

1. On direct assignment from Defense Secretary McNamara, Davis has been running short term analyses on various weapon systems, giving McNamara some background on "buy" alternatives. The analyses are used by McNamara as backdrop, are regularly covered with notes McNamara scribbles on the charts to remind himself to

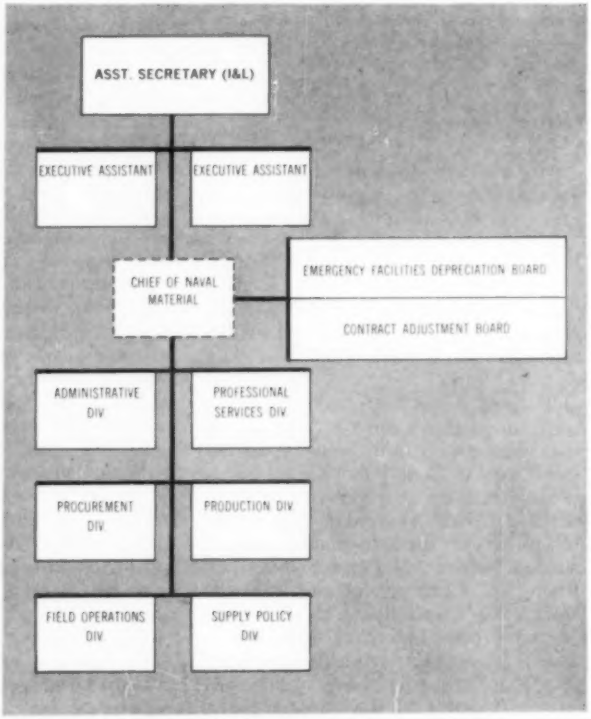


Major change here is absorption of Properties and Installations, once a separate secretariat.

Here's how top Defense logistics support groups are set up in Washington. Above—I&L secretariat; lower left—Armed Forces Supply Support Center; lower right—Navy; top right—Army; lower right—Air Force. Morris' philosophy: they are all part of the same team.



Efficiency team: Armed Forces Supply Support Center.



Navy's group for supply top policy.

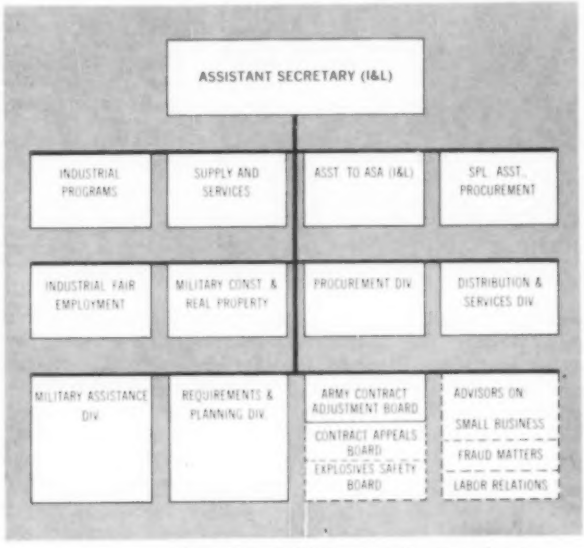
ask questions of the people responsible for developing various weapon systems.

The analyses tend to pull research and engineering, dollars, and various other resources together on a program, indicate when each element will have to make a decision at critical points in hardware development. Analyses also show these milestones where selected. The technique, which touches on the Hitch program package effort but looks farther into the future, as far ahead as 1972, has spread until now the services are doing this sort of analyzing on their own.

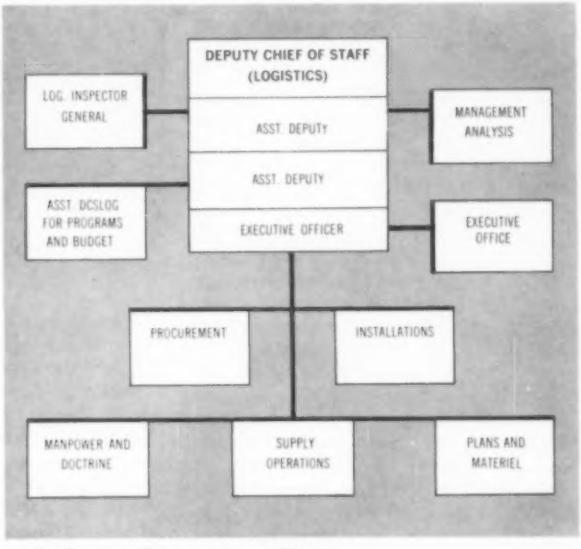
Chart information includes basic facts, objectives, i.e. what the contribution of the system to military strength will be, weapons characteristics. It also identifies important milestones, in a simplified form gives "tremendous insight" into the status of weapon system developments.

Reason for the analysis: McNamara wants to know each month where a program stands, if it has funding problems, if a decision is needed and by whom, if the program is slipping.

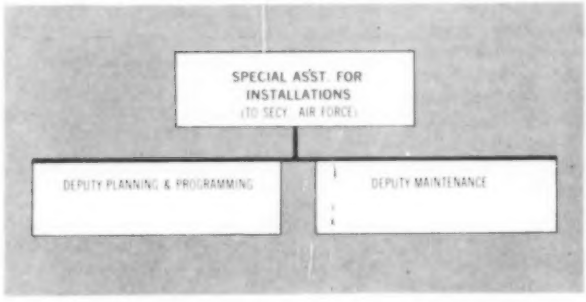
Comments McNamara, "I want my investment and R&D costs laid out on various programs." The charts, with their events, milestones and money demands, and status, are used for monitoring, not as information which requires decisions. Main reason the anal-



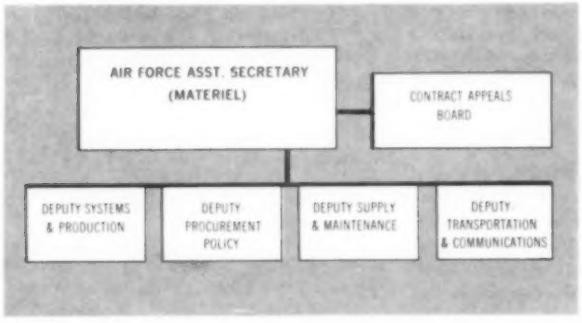
Army's civilian supply monitors . . .

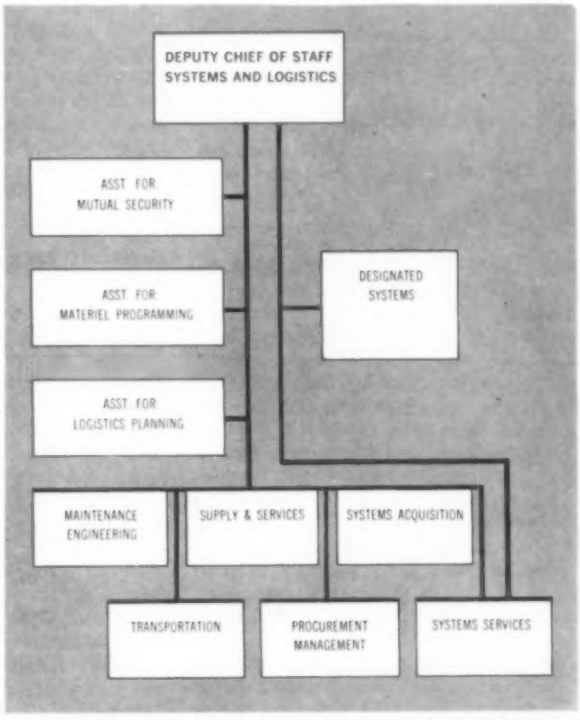


and the workmen in uniform.



Holdover, in form, from last year, AF bases (above) and buying are still separate offices at civilian level.





Air Force buying now closely tied to R&D.

yses exist at all: McNamara has concluded that while the budget cycle normally rings the bell on all these areas (in connection with a particular program's development) McNamara has found that this is not necessarily the best timing. In effect, instead of making the programs fit the cycle, he is adjusting the cycle to fit the programs.

PERT Under Fire

Probably the biggest contribution Davis makes in putting these charts together at the OSD level is that he can squeeze a lot of the separate service sales pitch out of particular program analysis, give McNamara clues to where there may be inaccuracies either of omission or downright error.

2. One aid these analyses give Davis in carrying out his own job is that they begin to pull productivity information out of industry—"which makes them the subject, as you might imagine, of more incandescent conversation. Industry is, probably understandably, very chary of this sort of thing because it doesn't leave them much room for internal maneuvering." One reason: Davis uses the information to search for spots where components can be broken out of hardware programs that could be let through competitive bidding. "We have been working very closely with all the services on this, and all of us have had to fight defense-industry politics hard to get what we needed."

3. Davis' quality control group is in the process of formulating a series of manuals, statistical analyses to prove not only quality control per se but the calibre of the inspectors, has a big exercise going on now on a whole series of military specifications whose end object will be to tie quality control down.

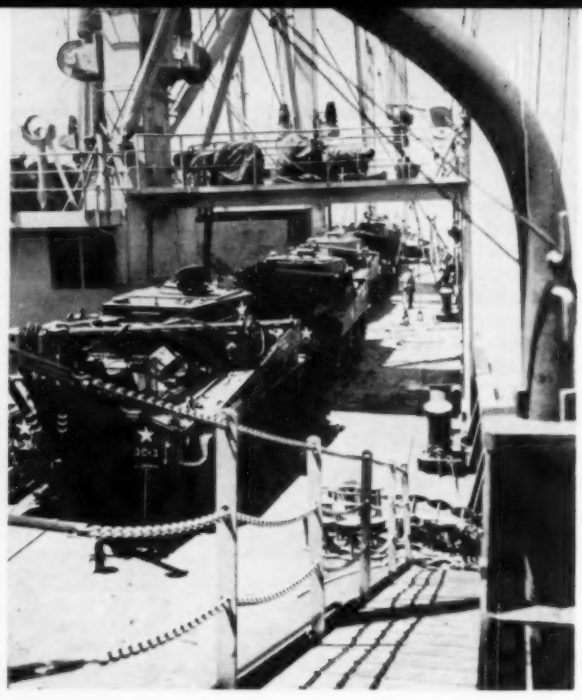
4. With all his other responsibilities, Davis is also leaning on the almost abstract management area of reporting, not only with the services but in industry, getting from the services ball park estimates of the amount of time spent on reporting documents. His constantly needling question: "How do you use this report? Don't tell me you find it of value and we must keep it. I want to know how and why and when and where and for what reason."

Says Davis, "What we're searching for is a self-policing system in this area. We all know that every once in a while a CO will roar off on the reporting business, eventually sort of let it fade away, and the excess, useless and pointless reports grow back in like weeds."

5. One more vital area in which Davis is running an investigation is the specifications busness, long the target of a lot of industry pressure. The questions, still unanswered: "What is the role of specs in government-industry activities and what's wrong with the whole thing?" Davis' comment: "It's an easy question to ask, we found, and a rough one to answer."

6. Davis' office has become one of the first . . . to take some of the blush off the current glamor girl of both Defense and industry management operations—PERT. This is a move that Defense PERT experts have been calling for since late 1959.

"We're taking a hard look at how PERT is being applied both in Defense and industry. We have a rather strong suspicion that (1) PERT is being used in places where it shouldn't and (2), even beyond that, that an awful lot of stuff cropping up recently in the program control business calling itself PERT really isn't."



Left: near Beirut, tank retrievers and M-48's prepare for beach unloading from USNS Comet.

Right: at Giessen, Ger., new loading techniques make possible hauling six Clarkter warehouse tractors on a flat car that once could carry only three or four.

Breakdown

I&L's charter, in brief: principal staff assistance to the Defense Secretary in the functional fields of materiel requirements; production planning and scheduling; acquisition, inventory management, storage, maintenance, distribution, movement and disposal of materiel, supplies, tools and equipment; small business matters; transportation, telecommunications, petroleum and other logistical services; supply cataloging, standardization and quality control; commercial and industrial activities and facilities, including fixed industrial equipment; military construction including Reserve Forces facilities; family housing; real estate and real property; vulnerability of resources to attack damage; economic adjustment assistance.

Tom Morris' team has an authorized personnel strength of 225 persons (132 professional civilians, nine military, and 84 clerical) and, like most OSD offices, hopes some day to fill it out completely. The breakdown, with thumbnail job descriptions:

Economic Adjustment Advisor

Handles policies, plans and programs to minimize the economic impact on communities resulting from shifts and changes in Defense programs with emphasis on base closure and reduction actions; changes in procurement programs.

Requirements and Readiness Planning

Is responsible for policy guidance, planning, review and analysis of logistics programs and requirements for conformance with national policy and approved plans; analyzes nuclear material needs and advanced weapons delivery systems for correlation with military programs and logistics planning; policies, programs, systems and procedures for priorities, allocations and urgencies; is Morris' key advisor on I&L organization, key objectives and internal and external relationships.

Among its other chores: seeing that I&L makes its appropriate contribution to Defense budget formulation and execution, emergency planning, National Security Council matters, Civil Defense Mobilization matters and to the Defense Ballistic Missile committee; furnishes guidance for Defense vulnerability, damage assessment studies, and beyond that, sees that the military departments implement its policies, etc.

Procurement

Procurement policy directorate—besides being administrative focal point

for the highly important operations of the Armed Services Procurement Regulations committee, office reviews government procurement policies and procedures to improve efficiency, simplify, assist in formulating Federal Procurement Regulations; also is responsible for DOD procurement policies, systems and procedures.

Small Business policy directorate—office name is almost self-explanatory. Provides advice and assistance to small business through the Military Procurement Information office, comes up with the rules to assure small business and equitable opportunity to compete for Defense contracts, also sets policy, provides guidance for DOD programs to assist labor surplus areas.

Supply and Services

Like all directorates in Morris' office, basic charters here say they are responsible for "policies, programs, systems and procedures." The specific fields:

Supply management policy directorate—in fields of inventory management, utilization of excess, disposal of surplus, coordinated procurement. Also sets policies affecting the operations of existing single manager assignments and the extension of single manager assignments to other commodity areas except petroleum (see below); provides policy direction and program guidance for standardization of supplies, equipment, packing and packaging, maintenance and departmental use of the Federal Supply Catalog System; coordinates assignment of projects to the Armed Forces Supply Support Center.

Petroleum Logistics policy—headed by a Navy vice admiral, office amounts to a top authority on where petroleum fits in both wartime planning and peacetime procurement and supply; handles everything from policy direction of the Petroleum Single Manager through estimates of resources, stockpiles and probable damage to determining, through appraisal of strategic plans, probable petroleum availability and industrial feasibility of JCS requirements in wartime.

Transportation and Warehousing policy—policies, etc., in transportation, traffic management, movement control, warehousing, including direction of single managers in the first two categories. Also is responsible for efficient, economical operation of storage and warehousing activities of the military departments in management, operation and utilization of facilities, materials handling activities and storage maintenance, handles long-range emergency planning and feasibility testing in these areas as well.

Telecommunications—policies, etc., governing management and usage of military telecommunications services and procedures including utilization of commercial services; evaluates military telecommunications programs to assure efficiency and economy of operations, validity of requirements, economical usage of commercial facilities, maximum integration and compatibility.

Production Management

Production—in the fields of economic studies of essentiality, commercial-industrial activities, production scheduling and special expediting assistance, industrial facilities protection, quality control and reliability assurance, special production activities, industrial production equipment.

Maintenance—policies, etc., in the field of material maintenance, review and evaluation of maintenance management systems and the criteria for the overhaul and repair of equipment and supplies; assistance to all components of DOD on matters pertaining to maintenance.

Properties and Installations

Next to Supplies and Services (with 56 persons on the payroll), this directorate (with 47 people) is the largest, was once ranked as a separate assistant secretariate until McNamara took office and sent them under Morris' wing.

Construction—handles policies, etc., in current military public works construction, long-range and mobilization construction program planning for the military departments, maintenance and protection of real property and related services; collaborates with the Comptroller to tie down financial plans in support of construction programming, supports military construction appropriations to the Bureau of the Budget and congressional committees; handles post authorization and post appropriation determinations with respect to apportionment of funds.

Real Property Management—is responsible for policies, criteria and standards for real property management acquisition, utilization, disposition, restoration, expansion; evaluates real property holdings of the military to determine those appropriate for disposal.

And buried at the bottom of nearly all these job descriptions is an almost euphemistic description which hardly begins to describe the headaches that this particular responsibility frequently involves. The footnote: "Representation of the Department of Defense on (particular function) matters with (1) The Congress; (2) Industry; (3) other Government agencies.

Armed Forces Supply Support Council

Consists of the Assistant Secretary (I&L) or his designee as chairman, a Flag or General officer from each of the four military services and the Director of the Armed Forces Supply Support Center. Council serves as an executive group responsive to the Services, under the direction of the Secretary of Defense. It exercises general direction over the work of the Supply Support Center, administers the Federal Catalog, Defense Standardization and Defense Materiel Utilization Programs and analyses of the operations of supply systems of the military services concerned with commercial and non-commercial common items of materiel. ■

Manpower

Carlisle P. Runge

Dealing with people—the most important product of the U.S. Armed Forces—can pose more problems than developing an anti-missile missile. Present puzzles confronting the military personnel planners include the Berlin crisis build-up, officer grade limitations and the "Hump."

Manpower: "A Fluctuating Situation"

A NEWS MAGAZINE said of Robert S. McNamara upon his appointment as Secretary of Defense: "Detroit associates expect that McNamara will be dutifully efficient in following Jack Kennedy's lead; they also expect that his austere manner and lack of defense experience may lead to personal difficulties until he gets the feel of Washington and his new job."

Washington and the Pentagon had hardly met McNamara when he began streamlining the front offices in the Department of Defense. One of his first moves was to abolish the office of the Assistant Secretary of Defense (Health and Medical) and place its duties under the office of the Assistant Secretary of Defense (Manpower)—an office which was already carrying more than its share of the Defense burden.

The Manpower office is headed by Carlisle P. Runge, a 41-year-old lawyer and Army Reserve Colonel who, before his appointment to the DOD staff, was chairman of the University of Wisconsin's Special Committee on ROTC.

Runge heads an office which is deeply affected by changes in world affairs, technology and economy because it deals with the most important factor in the Department of Defense—people.

As one manpower official puts it: "Our biggest problem today is what the future holds for us and what are our manpower resources, both military and civilian."

One of the biggest headaches today for the manpower office is the large build-up of personnel since the Berlin crisis, giving military personnel planners more problems than they care to admit. Many of the problems center around the reservists who have been activated. In many cases it will mean a substantial cut in salary, leaving behind families for a non-war tour of duty in which much of the understanding displayed in war conditions is absent. Economy of whole communities will suffer. Employers, in many cases, will suffer hardships because of losses in personnel when reservists were re-called or activated.

Berlin Build-up

The one service which felt the change the most is the Army. The fluctuating military personnel situation has presented them with a whole new set of problems, unlike those in wartime. It means providing an almost wartime force with what it normally operates a peacetime force on. National Guard units and Army Reserve units will be bringing their own equipment with them which will mean operating under a different budget.

Regulating the draft call is another problem confronting Army. Its draft calls, which *do-not* contribute the greatest amount to the personnel build-up as many people believe, are based on the expected enlistment and re-enlistment rate. Many soldiers presently on active duty will have their present enlistments extended for another year in order for the Army to hold certain skills and maintain its present quota.

Army draws the greatest number of personnel from the ranks of the National Guard and Army Reserve. For every active Army unit, company or division that is sent abroad, a National Guard or Army Reserve replacement is called to active duty. During the Berlin crisis, individuals, as well as units, were, and are still being called to active duty. To help fill gaps that existed in the reserves and the Army National Guard. At the time President Kennedy started building up the Armed Forces, most of these units were said to have been at 70 per cent of authorized strength.

Total strength of the Armed Forces "ready" reservists totals a little more than two million with back-up strength of "standby" reservist at a little over one million. Ready reserves are those who are subject to immediate call while stand-by reserves are those who have completed their ready reserve duty.

"Ready" reserves are made up of these three categories:

(1) Skilled men who have completed a two-year enlistment in the regular service and are finishing off their obligations in the "ready" reserve.

(2) Enlistees in the National Guard who have served six months on active duty and are completing their tour with the Guard by attending weekly meetings and two weeks of summer encampment.

(3) Those enlisting directly in the armed forces reserve, serving six months on active duty training, then finishing off their enlistment by at-

The Air National Guard stands ready for active duty call to back up U.S. military forces . . .

tending weekly training and a tour at summer encampments.

The addition of reserve forces to the active duty forces has produced headaches. One case involves promotion for those already on active duty. Since integration will produce more men in each skill, it will mean advancement will be slower because of rate and rank quotas. What the active duty soldier was able to enjoy during peacetime conditions he will now have to share with his reserve counterparts. This, some personnel planners believe, will have a gross effect on the morale of regular personnel.

One problem integration poses on the commissioned front is the number of flag rank officers, particularly in the Army. Before the Berlin crisis, Army was operating within its quota of Generals. With the call-up of reserve forces, who brought their generals with them, Manpower now has to buck Congress to get the Officer Grade Limitations Act revised on the number of generals on active duty. Navy and Air Force do not enjoy the same problem with generals and admirals.

"Project Top Star"

On the same front, retention is another problem that has plagued the armed services since "specialized" became the by-word for skilled. The Armed Services pay out millions of dollars each year to train men who, in a lot of cases, serve their obligated time and get out to use their training in a better paying civilian job.

One of the most active programs in the Department of Defense today, designed for the specific purpose of retaining skilled personnel, is being conducted by the Air Force. Billed as "Project Top Star," the program is concerned with the retention of young officers who, like their equals in the Army and Navy, serve their obligation and then return to civilian life.

This situation is not a new one. When military planners think about what they refer to as the "Hump," it is enough to make them want to go into the infantry, deck group or some other field. The problem stems from the build-up of World War II officers who will be coming up for retirement during the next few years. These officers, by weight of their numbers, created a management problem of such proportions that in the Navy and Air Force, Congressional relief was needed.

What happened was that in the heavy influx of officers to support the World War II effort provided a great number of people with approximately the same amount of time in service.

Since all were looking for twenty-year retirement, all were scheduled to get out of the service at about the same time. The result was something like the hump on a camel's back. The whole system bulged.

As a result, the past few years saw a tremendously lopsided officer personnel structure in the services, with a heavy preponderance of active officers in the Major/Lt. Cdr. to Capt./Colonel ranks.

It meant a serious bottleneck in promotions from company to field grade for the younger officers coming into the service after World War II, and down to the present.

And so the already tough problem of inducing the best manpower material to make a career of the military became even harder. This was the big, and only reason for Air Force's Project Top Star.

Army was probably least effected by the Hump. Air Force was able to postpone their problem with temporary Congressional increases in some grades. Navy was able to handle the problem only with an appeal to Congress which was answered, to be able to retire a number of its officers early.

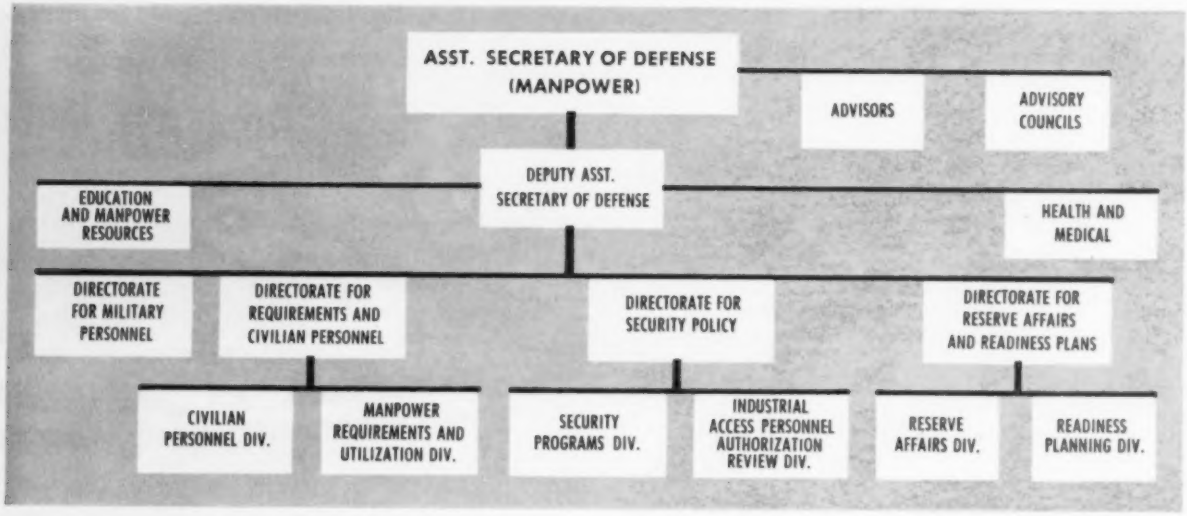
Loss of Young Officers

With both Navy and Air Force working with 100% volunteer forces and Army relying on the draft for a small portion of its personnel, it is not surprising that the main emphasis in present military personnel management is on the quality of the men who come into the service.

The obvious corollary to this is retention—the ability of the services to keep who they want after they get them.

Project Top Star provided these measures to correct Air Force's problem:

(1) The compulsory training resulted in a lot of young officers losing their motivation for staying in the Air Force. Project Top Star gave the Technical Training Program a higher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DIRECTORATE FOR REQUIREMENTS AND CIVILIAN PERSONNEL
DIRECTORATE FOR SECURITY POLICY
DIRECTORATE FOR RESERVE AFFAIRS AND READINESS PLANS
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MANPOWER REQUIREMENTS AND UTILIZATION DIV.
SECURITY PROGRAMS DIV.
INDUSTRIAL ACCESS PERSONNEL AUTHORIZATION REVIEW DIV.
RESERVE AFFAIRS DIV.
READINESS PLANNING DIV.

priority for the withdrawal of officer volunteers from their specialty for training consistent with long range Air Force Manning requirements.

(2) The major problem in this area was job dissatisfaction. Top Star provided for officer assignments to be centralized at Headquarters, USAF, using Electronic Data Processing equipment. Controlled assignments, while restricting further assignment at base level outside the officer's career field, does not restrict progression with the career field. This system provides information necessary to assign the maximum number of officers to that duty for which they are best qualified.

(3) Proper ROTC orientation. Many new officers were not prepared for the Air Force when they came out of college. A program was set up whereby the Commander, Air University, included in the AROTC Summer Encampment Program an orientation and classification session to be conducted by fully qualified personnel from the Air University. This measure will insure the new officer a better understanding of the relationship between his academic background and probable duties.

(4) Needed here was a system for checking malassignments. A classification and audit team was activated at Headquarters, USAF and at major command level. This team will assist commanders in effectively utilizing personnel resources.

(5) A personal touch was given to those who met eligibility criteria for recall. They were sent invitational letters soliciting voluntary return to active duty. Representatives from using command followed up the letter with a personal visit to the prospect's home.

(6) An annual Air Force-wide personnel retention clinic will be conducted to promote continuing emphasis on the retention problem, an interchange of ideas and thinking among commanders.

(7) A program was set up at the Squadron Officer School, Command and Staff College, and War College of the Air University in which the officer retention problem and its relationship to the principles of human relations and personnel management were included in the curricula. Project Top Star has stressed the fact that officer retention is a command responsibility and that all career officers are expected to contribute to the success of the effort.

(8) The ceiling on regular officers was raised by 13,885. Regular appointments will be more effectively used as a major career motivational tool. In addition, criteria was changed for designation of AFROTC cadets as Distinguished Military Graduates. The object of this was to enhance selection procedures and facilitate appointment of more qualified regular officers.

(9) With the approval of the Officer Education Program, all officers are required to enter active duty in regular or career reserve status.

(10) Keeping personnel informed and giving reasons why policy changes were made, etc.

What Project Top Star hopes to accomplish in the end is a retention of 51% of the young officers, as opposed to the 37% that Air Force is presently maintaining.

The Air Force Systems Command had a similar program started before Project Top Star got underway. Labeled "Accent on People" by Lt. Gen. B. A. Schriever, Commander of AFSC, it was concerned primarily with the personnel problems of AFSC. (See AFM, Dec. 1960).

Personnel retention isn't the only problem facing people in the Manpower office. One of their biggest personnel problems in the military is in the medical field. There exists in the armed services a shortage of doctors, dentists and nurses. The big problem in providing medical skills is getting the right medical skills at the right time. Studies are currently being made as to the feasibility of drafting doctors, dentists and nurses. The most critical shortage is in the nursing field.

The Manpower office also handles Defense Department security policies, programs and practices, along with representation outside DOD on security decisions pertaining to industrial personnel. The Industrial Personnel Access Authorization Review Board handles cases involving validity of personnel in industry to see classified material. They do all screening, hold hearings and review cases when questions come up regarding a particular individual's necessity to see DOD classified material.

The former Office of the Assistant Secretary of Defense (Health and Medical), under the new organization, is now the Deputy Assistant Secretary for Manpower (Health and Medical). The functions are basically the same, but it allows for a more streamlined reporting chain, the thought behind Secretary of Defense McNamara's decision to re-organize two top level offices.

In addition to military personnel, the Manpower office is also responsible for over a million civil employees of DOD. (This figure includes 177,000 foreign nationals.)

The Statement of Personnel Policy for Civilian Personnel in the Department of Defense declares: "The Department of Defense is responsible for the security of our country. Civilian employees share fully in that responsibility. Use of civilian employees affords

abilities not otherwise available, assures continuity of administration and operation, and provides a nucleus of trained personnel necessary for expansion in any emergency. Because civilian employees free military personnel for primarily military duties, they shall be utilized in all positions which do not require military skills or military incumbents for reasons of training, security, or discipline."

It is the job of the Manpower office to see that civilian employees are provided for, represented, given certain health benefits, awards, leave, travel, etc.

In sum, the Assistant Secretary of Defense has his work cut out for him over the next few years with the international situation being what it is. As one personnel manager puts it: "It's a fluctuating situation. No-one knows what size force we need, neither today or in the future."

Breakdown

The Office of the Assistant Secretary of Defense (Manpower) is composed of 127 civilian employees (58 professional and 69 clerical) and 62 military (55 professional and 7 clerical). He is the principal staff assistant to the Secretary of Defense in the functional fields of: manpower, personnel and reserve affairs, including health and medical matters; Armed Forces education, including information; health and sanitation; medical care and treatment of patients; hospitals and related health and medical facilities; safeguarding of classified information and activities and related personnel and physical security; industrial relations; and federal voting assistance.

Here is a thumbnail job description, by office, of the Office of the Assistant Secretary of Defense for Manpower:

Reserve Forces Policy Board

Gives policy advice to the Secretary of Defense and Assistant Secretary of Defense (Manpower) on matters pertaining to reserve components and ROTC, as well as: coordination of these programs; location, composition and type of units; and location, size and type of training facilities. It also makes recommendations on budget estimates and legislation for Reserve Forces activities. Status reports on Reserve Programs is another function of the Reserve Forces Policy Board.

Advisory Councils

These include the Armed Forces Chaplains Board, Civilian Health and Medical Advisory Council, Defense Dental Advisory Committee, Education Advisory Committee, and the Advisory Committee on Women in the Service.

Above: Navy technician checks out Talos aboard USS Galveston. Below: 28th Nat'l. Guard members in training. In sum: Defense needs a limitless variety of talent.

Education and Manpower Resources

Responsible for educational plans, policies and programs for the Department of Defense, including Armed Forces Information Programs. Provides policy direction, review and coordination of the Armed Forces Education and Information Programs of the military department. Promotes close cooperation and mutual understanding between the Department of Defense and educators, educational institutions and other related organizations.

Handles manpower resources aspects of policies and programs for: (1) obtaining priorities for and meeting manpower requirements for DOD and its contractors; (2) increasing and conserving manpower having scientific, professional, technical and other critical skills; (3) requesting exemptions or deferments of selective service registrants and standby reservists for occupational reasons for DOD. Represents DOD, as appropriate, on matters affecting manpower resources and Armed Forces Education and Information Programs.

Health and Medical

Sets policies, plans and programs for the Department of Defense in the fields of health, sanitation and the medical care and treatment of patients. Provides health and medical aspects of DOD policies, plans and programs on: (1) hospitals and related health and medical facilities; (2) health and medical personnel; and (3) health and medical materiel. Promotes closer cooperation and mutual understanding between the Department of Defense and the civil health and medical professions.

Assures effective implementation of DOD health and medical policies, plans and programs by the military departments, and other DOD agencies. Represents DOD, as assigned, on health and medical matters.

Military Personnel Directorate—Sets policies affecting active duty and retired military personnel of the DOD, as individuals, and their dependents. Makes policy recommendations on legislation, Executive Orders and directives affecting military personnel.

Requirements and Civilian Personnel Directorate—Sets manpower plans, policies and programs for DOD, as well as policies and procedures for civilian personnel of DOD in the areas of Compensation and Allowances, Procurement and Administration, and Morale and Welfare. Makes manpower requirements evaluation and ceiling authorizations within DOD, and assures efficient and economical manpower utilization within DOD. Gives DOD positions on legislative actions affecting DOD manpower and civilian personnel policies. Represents DOD on manpower requirements, manpower utilization, and civilian personnel.

Civilian Personnel Division—Sets policies affecting civil employees of DOD. Implements legislation, Executive Orders, Civil Service Regulations and other directives governing the administration of civil personnel, and represents DOD with other Government agencies.

Manpower Requirements and Utilization Division—Sets plans and policies for manpower programs and makes manpower requirements evaluation and ceiling authorizations. Insures efficient and economical utilization of manpower. Represents DOD with Congress and other Government agencies on manpower requirements, programs and utilization.

Security Policy Directorate—Sets DOD security policies, program and practices. Handles administration of the Industrial Personnel Access Authorization Review Program. Assures effective implementation of DOD security policies and program by the military departments and other DOD agencies, and represents DOD on security matters.

Security Programs Division—Sets policies and standards for DOD security matters involving: (1) classified Defense information; (2) International pacts and agreements; (3) Military and civil personnel; (4) industrial facilities and personnel; (5) physical protection of classified Defense information; and (6) education and training of personnel engaged in the above operations.

Industrial Personnel Access Authorization Review Division—Handles screening, hearing and review of Industrial Personnel Access Authorization Review cases.

Reserve Affairs and Readiness Plans Directorate—Sets plans, policies and programs of DOD for reserve forces, including ROTC, and readiness planning. Gives DOD positions on legislation, Executive Orders and directives affecting reserve personnel and readiness planning. Coordinates with the Office of the Assistant Secretary of Defense (International Security Affairs) on matters relating to the training and equipping of reserve forces. Represents DOD, as appropriate, on matters pertaining to reserve forces and readiness planning.

Reserve Affairs Division—Sets policies affecting the reserve forces and ROTC. Implements legislation, Executive Orders and directives affecting reserve personnel. Coordinates with the OASD (I&L) on matters relating to training and equipping of reserve forces. Represents DOD with other agencies and reserve and civil organizations. ■

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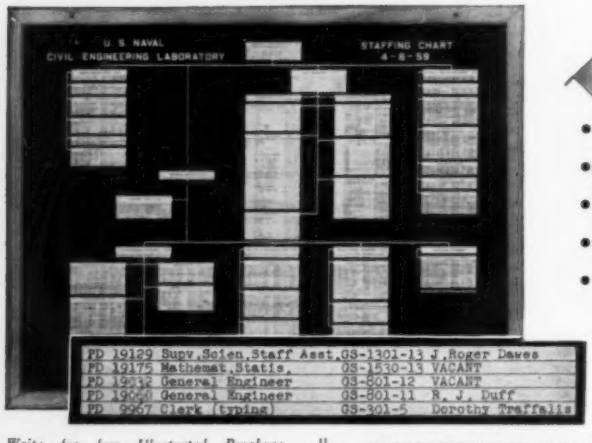
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Director, Defense Intelligence Agency

Lt. Gen. Joseph F. Carroll

After a thorough study by the JCS and other components of DOD, Defense Secretary McNamara established—like the Defense Supply and Communcations agencies—an agency to obtain greater unity among all DOD components involved in collecting, producing and disseminating intelligence information.

DIA To Obtain Greater Unity

INSTITUTED LAST August and soon to be at full operational status is the Defense Intelligence Agency, established to obtain greater unity among all DOD components developing military intelligence, and increasing the capacity to collect, produce and disseminate intelligence information.

The Agency is presently setting up headquarters at Cameron Station in Alexandria, Va. near the Pentagon.

Selected to head the new Agency was Lt. Gen. Joseph F. Carroll, USAF, who was Inspector General of the Air Force and a former member of the Federal Bureau of Investigation.

Gen. Carroll joined the Air Force on loan from the FBI in 1947 to organize the new department's agency for investigation and counter-intelligence. He was ordered to active duty in the grade of Brig. Gen. in 1948 and was promoted to Maj. Gen. in 1950. In 1960 he was promoted to Lt. Gen. and assumed the position as the Air Force's Inspector General.

JCS Study Used

The establishment of DIA was based primarily on a concept and plan developed by the Joint Chiefs of Staff at the request of Secretary McNamara, and represented the culmination of studies on Defense intelligence activities conducted by the Joint Chiefs of Staff and other components of the Department of Defense, including the Office of Organizational and Management Planning in the General Counsel's Office, over a period of six months.

Gen. Carroll's term of office is for four years. He and his aides report through the Joint Chiefs of Staff to the Secretary of Defense.

What It Will Do

At the time of its establishment, Secretary of Defense McNamara said he expected the new Defense Agency would result in more efficient allocation of critical intelligence resources, more effective management of all Department of Defense intelligence activities, and the elimination of duplicating facilities, organizations and tasks.

The Agency shall consist of a Director, a Deputy Director, a Chief of Staff, a headquarters establishment, "and such subordinate units, facilities, and activities as are assigned . . ."

Among other functions the Agency is expected to:

—"Develop and produce all DOD intelligence estimates and DOD information and contributions to National Estimates for the United States Intelligence Board . . ."

—Provide for the assembly, integration, and validation of all Department of Defense intelligence requirements and the assignment of relative prioritories thereto; assign specific requirements to Department of Defense collection resources; and originate requests, when necessary, to non-Department of Defense collection resources to fulfill DOD requirements."

—"Establish a single DOD Collection Requirements Registry and Facility . . . Provide plans, programs, policies and procedures for DOD collection activities . . . Conduct such technical and counterintelligence functions as may be subsequently assigned . . .

—Provide all Department of Defense current intelligence . . . Establish and maintain the DOD Indications Center . . . Conduct coordinating and planning activities to achieve the maximum economy and efficiency in the conduct and management of all Department of Defense intelligence activities . . .

—Provide the Secretary of Defense, the staff assistants to the Secretary, the military departments, the Joint Chiefs of Staff, specialized DOD agencies, the unified and specified commands, and other organizations in the national intelligence community with military intelligence."

—"Develop DOD intelligence research and development requirements." ■

Public Affairs

Arthur Sylvester

Public Affairs is an impossible job. In a field which operates almost solely on judgment, no matter what the decision is, it will make somebody mad.

Public Affairs: Short Trip to Damnation

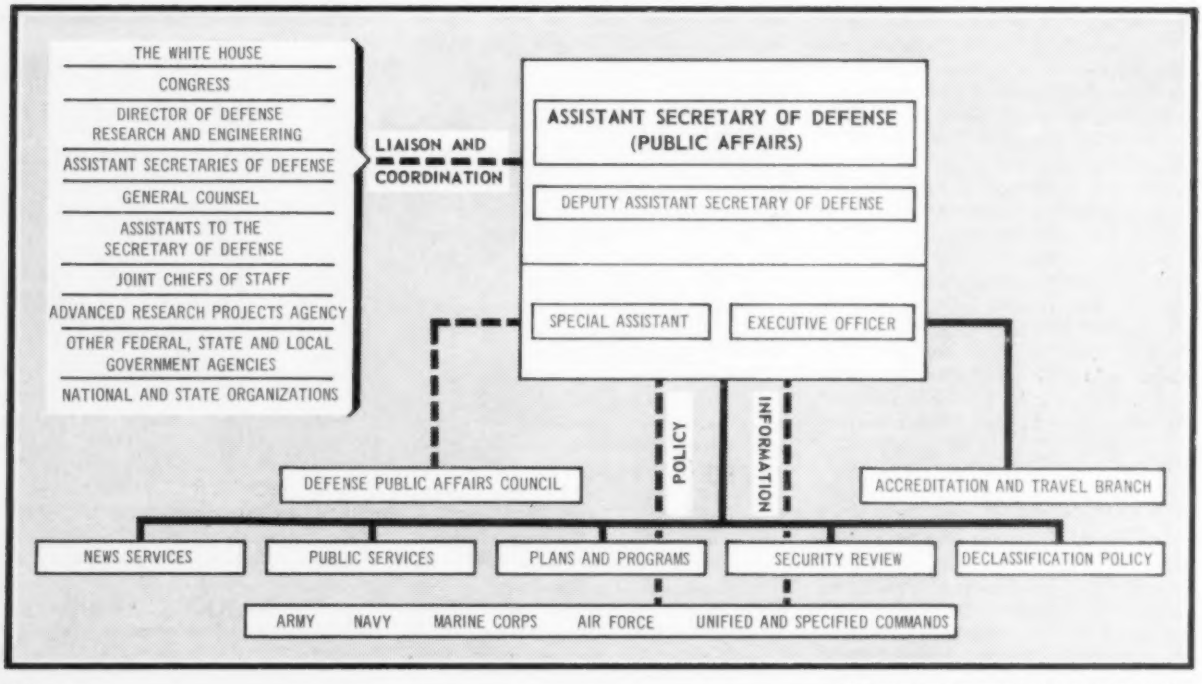
AS A "BRUISED but not bowed" Murray Snyder could have told him, Assistant Secretary of Defense for Public Affairs Arthur Sylvester has the "damned if you do, damned if you don't" job in the Pentagon.

That job, essentially, is the impossible task of reconciling the "right to know" with the "need to know."

The public, who pay the $49 billion dollar defense tab, and who would be the most effected if anything went wrong, have a right to know how the Defense Department is protecting them. And if Sylvester for a moment forgets that fact, there are a score of journalists at his elbow and freedom of information advocate Congressman John E. Moss (D.-Calif.) to remind him.

The nation and its elected leader, on the other hand, have a duty to guard our military secrets from the enemy. And if Sylvester forgot this for a moment a score of security people, his direct boss, Robert S. McNamara, his indirect boss, John Kennedy, would not only remind him but could possibly throw him in jail for giving aid and comfort to the enemy by violating security laws.

Other headaches assigned to Sylvester include: making sure that statements by defense officials do not violate security or disagree with national policy, checking advertisements by de-



fense contractors for the same reasons, and reviewing promotional campaigns launched by the separate services.

So far, Sylvester has gone to the mat with the press, certain generals and admirals (the most publicized being Maj. Gen. Edwin Walker), Senators, many defense contractors, movie directors, and a sometime TV comedian by the name of Jack Paar.

His worst of many bad moments was when the press discovered that after he had axed their free military transportation to and from service presentations, Sylvester himself had hitched a free ride on the President's plane to sell a house in New England.

Though hurt by the fact that some of his old journalist buddies don't speak to him any more, Sylvester has so far come through the hurricane swirling around his office not much the worse for wear. One reason is that his many years of meeting tense deadlines as a newspaperman helped prepare him for his present nerve jangling assignment.

Sylvester received his A.B. from Princeton in 1923 and began his long career as a newspaperman with the Newark, N. J. News in 1924. He was named assistant city editor of that paper in 1929, city editor in 1936, and after a war time stint handling news for the Treasury Department's fourth war loan drive, Washington Bureau Chief for the Newark News in 1944.

He is a member of the Washington newspaperman's most exclusive fraternity, the Gridiron Club, and as a newspaperman was known for his keen interest in and intelligent reporting of defense matters.

Job Tougher

If anything, Sylvester's job is tougher than Snyder's was. Sylvester's boss came to Washington with little experience in handling himself in the public limelight, more used to the controlled-information handouts of the Ford Co. public relations department.

Also, McNamara had many other urgent things he wanted to do, and press information came way down the line. Sylvester ran into a situation which got worse as the weeks went by: McNamara's reorganization moves and roles created an increasing amount of news that had to be released, but the activity tied up so many of the top Pentagon managers that they had less time to see him to tell him what was going on. Meanwhile the barricades were going up down in the press room.

Sylvester's move to funnel all defense information through his office, (rather than having the services and other defense organizations release their own information) was in order, he said, to eliminate confusion and release of conflicting information, widened the rift between him and the press, who characterized the action as a "gag rule" depriving them of legitimate information.

A major complaint by press and subordinates is that Sylvester does not delegate enough responsibility to his able staff, but tries to restrict all decisions to himself and Deputy Assistant Secretary Nils A. Lennarston.

The major function each day of Sylvester and his news section is to pull information out of reluctant defense officials and withhold information from news-hungry journalists.

Don't Play Ball

Hampering him in his job of being in the middle of this tug-of-war over knowledge is the fact that some of his own team don't play ball occasionally.

One of the services "asked if they could put up a display (showing some of their weapons systems) assuring me that there was nothing classified in it. I said okay only to find out after the thing was up that it had many classified components in it."

An ad appears in a magazine in which is included a photograph of a weapon, showing in detail certain parts which are classified. "I call up the company only to find out that they have a letter from one of the services which even I would have taken to be an okay," Sylvester said, somewhat bitterly. "Ads do not have to go into such detail to get their message across."

One problem is that decisions on what to release and what not to must be made rapidly. In the security review section if an editor cuts an anti-communist slogan out of a General's speech, the lash-back can pack a wallop after the General has filled in his favorite Senator.

Are Army publicists justified in letting Jack Paar play hop-scotch on the West-Berlin, East-Berlin border with a supporting cast of combat troops? Or in letting Daryl Zanuck use troops to film a Normandy beachhead scene? Is a Navy-planned press tour worthwhile or just a junket dreamed up to promote Navy? Are proposed Air Force releases blowing its own horn too much on a joint project to the detriment of its sister services? These are the types of decisions that must be made every day, and quickly.

Whether he is right or wrong, Sylvester manages to keep a grin on his face. "I only hope they'll still talk to me back at the National Press Club," he says as he walks back into his office to tackle the latest new crisis. ■

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Director, Defense Communications Agency

RAdm. William D. Irvin

"We have developed a modern approach to this management task (but) to meet the need for accuracy, speed, reliability, survivability, and capacity, more growth and improvement are dictated."

DCA: How the Services Help Each Other

WHEN REAR ADMIRAL William D. Irvin was picked to run the Defense Communciations Agency, one month after Thomas S. Gates (then Secretary of Defense) defined the Defense Communications System in May 1960 and announced that DCA would be set up to run it, Admiral Irvin must have felt a little like a man who had walked to the top of Pike's Peak suddenly being ordered to climb Mount Everest.

In his favor: a reputation for (1) charging at tough problems with a "get-it-done" attitude; (2) possessing large quantities of know-how. He has had to draw heavily on both in the past several months.

As any communications expert, which Adm. Irvin is, could testify, pulling three global military communications networks into one totally integrated system was not going to be done merely with the stroke of Gates' pen. Says one DCA official: "it's like being ordered to pour gallons of three different kinds of paint into a barrel and stirring them to get a blend. It has taken, and will take, a lot of stirring."

Size of Barrel

Just the size of the barrel is awesome enough. Military-owned and leased communication circuits involve 3.4 million voice channel-miles and 6.9 million teletype channel-miles. On teletype alone there are some 110 million messages sent each year.

DCA would have operational control and supervision over a physical plant which cost approximately $2-billion to build, costs upward of $600-million a year in operation and maintenance costs, employs some 25,000 persons around the world to operate 85 major communications system networks and sub-system complexes.

Basically, when DCS got its functional papers, this barrel was divided into three sections with Army using Army-operated stations to handle Army communications, Navy using Navy-operated stations to handle Navy messages, etc. DCA's job, essentially: tie these resources into a single integrated Defense Communications System. Their mission: make total resources available to meet total requirements.

Specifically, the Defense Communications System (DCS), as defined by the Pentagon, "includes all worldwide, long-haul, government-owned and leased, point-to-point circuits, terminals, control facilities and tributaries required to provide communications from the President to and between the Secretary of Defense, the Joint Chiefs of Staff and other government agencies; from the Secretary of Defense and the Joint Chiefs of Staff to and between the military departments and the unified and specified commands; from the military departments to and between their major commanders and subordinate fixed headquarters; and from the unified and specified commands to and between their component and subordinate commands."

The DCS does *not* include: "tactical communications which are self-contained within tactical organizations; self-contained information gathering, transmitting and/or processing facilities which are normally local in operation and use; weapon systems requirements which cannot be meant through the facilities of the DCS; and land, ship or airborne terminal facilities of broadcast, ship-to-shore, ship-to-ship, and ground-air-ground systems."

No Real Gain

In effect, DCA is a kind of combination AT&T and Western Union for the Department of Defense. It has operational control and supervision over DCS stations all over the world but the stations are operated by personnel from the military departments. The hardware is purchased by the services. Closest analogy: on a railroad line, the military communications people are the terminals and switching stations, DCA is the dispatcher, load controller, and/or troubleshooter.

But pulling together a single system and increasing DCA capability to run it is a lot easier to say than to do. One big reason: the hundreds of little technical hurdles that have to be overcome. Example: in the three separate service Systems there are teletypes, for in-

stance, which operate at 60 words a minute, some at 100 words a minute, and others that operate at 66 or 75 words per minute. And communicators can't take any one of these circuits and just tie it to any other. It takes a long, sometimes brain-crushing crusade under such banners as "compatibility" and "standardization."

And on top of all their other problems, DCA was, in effect, going to have to sell the logic of a single system to separate service communications experts who had just finished a hot, hard debate over whether a single system was needed at all. (See January, 1960 AFM)

Reportedly, today, (due mainly to DCA's impressive management performance) service personnel on the firing line have pretty well gotten over a normally natural tendency to argue with somebody moving into what was once their area of sole authority. Nobody likes to lose functions, but the military reaction now amounts essentially to the closer people are to seeing the benefit of DCA's existence, i.e. the closer they are to the operating level, the more enthusiastic they are for the whole idea.

One sure sign that DCA would get this kind of acceptance: when it was first being organized, the services bent backwards to get their very best people into DCA. This took high-powered talent away from their own organization but it has been a major factor in making DCA effective.

And without these topnotch people, DCA could have been in big trouble right from the start. Reason: the first enigma Adm. Irvin faced was, "how many does it take to do a job which has never been done before and how should they be organized."

The first half of the question has been answered, at least temporarily. At headquarters, DCA's authorized strength is 212 persons, including 95 officers and 33 technical civilians. The answer to the second part has been reasonably simple, at least on paper. In addition to an Executive Branch for Administrative and Logistical Support, Irvin's headquarters organization has three major directorates:

Breakdown

1—Plans and Programs whose job description translates roughly into a near and next generation look into the future in basically the communications services area. Example: one service may contend it needs money to build another communications network, or needs to add to one it already has. Plan's responsibility: decide whether the service really needs to build a new network or could the anticipated workload be carried on another service's net which is not running to full capacity.

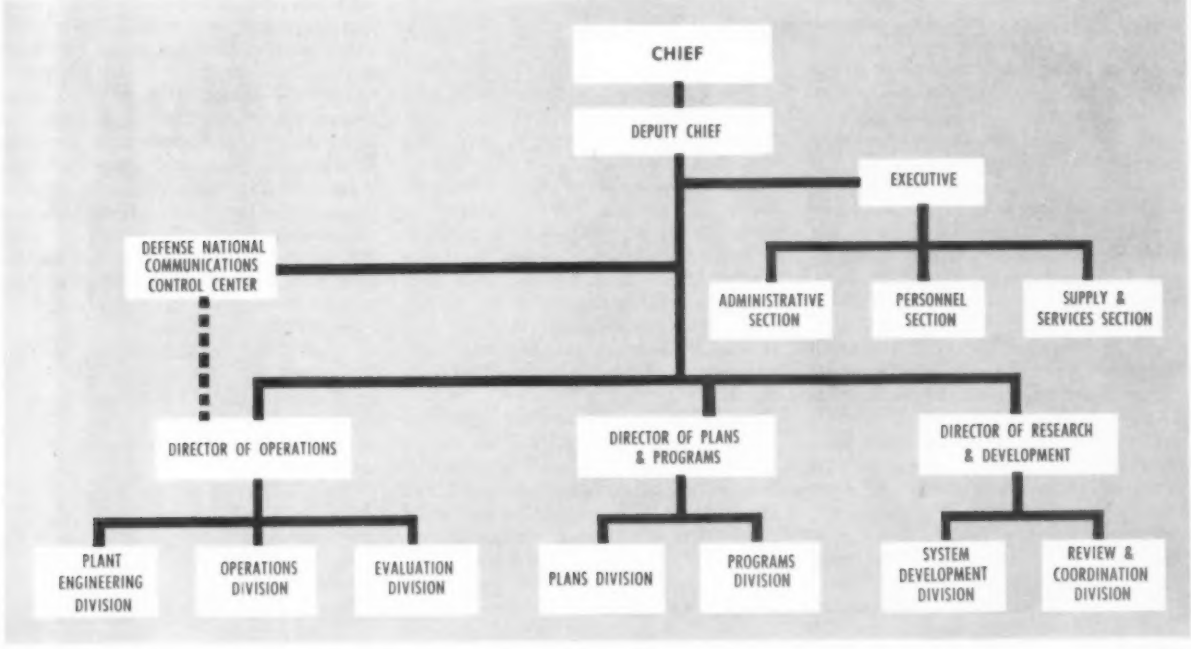
2—Research and Development which does the same sort of thing as Plans only in basically the hardware area. In the black box department, since each service is responsible for buying the hardware itself, each was and is running essentially separate and different R&D efforts—and planning to improve them, which in an era of technological revolution means they will get even more complex. R&D's job: make sure the new black boxes are (1) needed and (2) going to be compatible with the rest of the system.

3—Operations which most closely fits the description (see above) of DCA's load controller responsibility. Essentially, Operations is a supervisor of what's going on in the Control Center operation, outlined below. Monitoring, with hourly and spot reports on troubles (such as ionospheric storms in the North Atlantic) they shift the message flow from one circuit when it breaks down, is broken up by static, or just is too much load to handle at one time, to another circuit (which may be run by another service) that is clear and can handle the workload.

Spreading out from the Operations directorate is the Defense Communications Control Center organization. (Theoretically the pinnacle of this pyramid, the Defense National Communications Control Center, reports directly to Adm. Irvin but, in fact, their operation is monitored most closely by the head of the Operations directorate.)

DNCCC is located in the same building as DCA, and there are presently three Defense area Communications Control Centers located in Europe, Pacific and Alaska. Beyond that, on the drawing boards is a plan to set up regional centers to get even closer to the daily operating problems of communications. This organizational network job reflects probably the primary reason DCA itself was created. Until DCA, when a system belonging to one particular service got overloaded, there

(Please turn to page 120)



Defense Supply Agency Director

Lt. Gen. Andrew T. McNamara

Created to meet the increasing requirements of military readiness, the Defense Supply Agency evolved from the Single Supply Managers installed five years ago. Eventually DSA will control half of DOD personal property ($21 billion) and effect initial savings between $2-4 billion.

Defense Supply Agency to Cut Delays, Cost

WITH THE ESTABLISHMENT of the Defense Supply Agency on August 31, Secretary of Defense McNamara came to grips with a problem that has hampered the U.S. military forces since the Continental Congress first raised an army: a unified supply system serving all four services.

The new Agency evolved from the Single Supply Managers installed five years ago. Both moves have been dictated by the requirements of military readiness—far more urgently than the dictates of economy—which demand greater integration, cohesion, continuity, and compatibility if supply services are to be immediately responsive to our military forces throughout the world.

The new Agency will manage, procure and distribute certain common supplies and related services, once it has assumed the functions of the Consolidated Surplus Sales Office and those performed by Single Managers in the fields of Subsistence (Army), Clothing and Textiles (Army), Traffic Management (Army), Petroleum Products (Navy), Medical Supplies (Navy), General Supplies (Army), Industrial Supplies (Navy), Automotive Supplies (Army), and the Construction Supplies (Army).

Once the Agency has assumed these functions, the Single Managers will continue to be responsible for commodity management and procurement, operating as they have in the past, until the new organization has completed its housing and staffing phase.

Lt. General Andrew T. McNamara, USA, has been designated as the first Director of the Agency, and has already taken over the functions of the Armed Forces Supply Support Center. He has established temporary headquarters in the Munitions Building until completion of DSA headquarters at Cameron Station, Va.

Gen. McNamara's staff will consist predominantly of civilians, with military members being contributed on an equitable basis by the four Services. Already, the planning staff consists of more than 36 civilians and 18 military personnel.

DSA to Expand

The mission of the Agency is to provide responsive and dependable support to the Armed Forces by managing the standardization, cataloging, utilization and disposal of material throughout DOD, as well as integrating supply management of assigned commodities, system planning and design for those commodities. The Agency will also handle traffic management for DOD, coordinate procurement, analysis and studies of the scope of integrated management, and the inspection of materials.

Management of selected electrical and electronics material will be placed under the Agency as soon as possible. Studies are also being conducted to affect single management of industrial production equipment, chemical supplies, and aeronautical spare parts. Single Managers, soon to be operational under DSA, control $2.1-billion of the budget, with partially unified agencies controlling $1.6-billion. Once electronics ($66-million), chemical supplies ($500-million), industrial equipment ($5-billion), and aeronautical spare parts ($11.8-billion) are brought under DSA, it will give DSA control over more than $21-billion of DOD personal property—more than half the dollar value of all personal property in the DOD inventory. It will produce a $2-4-billion one time saving, and savings of $50-million per annum.

The Agency will perform or arrange for inspection of material and will fund and operate its own distribution system, using existing facilities of all the Services. Present assignments are estimated to involve annual sales of $3-billion, procurement of $2.6-billion worth of material, and management of a multi-billion dollar inventory. Approximately 1,200,000 line items will be under the Agency's management. Electrical and electronics alone will contribute 450,000 to the stock inventory, but will be only half the complete electrical-electronics inventory—since it consists of over 900,000 line items.

Since the establishment of the Quartermaster Department in 1775 by the Continental Congress, managers have been looking for a way to bring unity to the supply operation of the services.

Pros and cons on the question of a common supply agency for all the military services have been debated for over forty years. At least as early as World War I it was suggested to Mr. Bernard Baruch, Chairman of the War Industries Board, that one agency pur-

chase all military supplies.

Almost continuously since 1920, Congressional Committees have been concerned with the management of common supplies in the military departments. Many Bills were introduced to consolidate some logistic functions and the procurement function was invariably included.

The idea has found advocates among Congressmen and businessmen—and has been opposed just as vigorously by members of the same groups. Generally, military men have opposed the idea—but some prominent military leaders have advocated it.

For example, during Congressional Hearings in 1944, on the proposal to establish a "Department of the Armed Forces," General Joseph McNarney said: "I would add to the three armed services which are united in this single department, a fourth element, directly under the Secretary of the Armed Forces, which would consist of the common supply services that can be combined, and which render supply services which are not peculiar to any one service."

During the same hearings, General Somerville, Commanding General of the Army Service Forces, said: "The real integration would come about through the establishment of a common service force within a single department of war which would supply and service the three combatant forces on equal terms."

And the final Report of the Army Service Forces, furnished by General LeRoy Lutes to the Under Secretary of War and the Chief of Staff, had this to say about the experience of the ASF in WWII: "Logistics organization and procedures within and between the military forces were far from perfect during the recent war . . . The many self-contained procurement and supply agencies, eight in the War Department and eight in the Navy Department, had an adverse effect upon both industrial mobilization and the supply of combat forces . . ."

ASPR Policies

Almost a year before Pearl Harbor, the Quartermaster Market Center System, with headquarters in Chicago, was organized to purchase perishable foods for all the Armed Forces. In 1953 the Quartermaster Corps began to purchase non-perishable foods for the Navy and in 1955 implemented the first Single Manager assignment. It was then that it became responsible for the wholesale procurement and distribution of all subsistence—perishable and non-perishable—for all the military services. The establishment of the Quartermaster Market Center System in 1941 could well be termed the first building block in the foundation of the new Defense Supply Agency.

Next came the publication of the Armed Services Procurement Regulations (ASPR) which provided uniform policies for all the services on various aspects of procurement and inspection.

Single Department Procurement Assignments, under which one department becomes the procuring agency for a group of items to meet the needs of the other services, as well as its own needs, became another link in the chain.

Ending Duplication

Beginning in 1952 and completed in 1958, establishment of the Federal Catalog was one of the most important steps in the evolutionary process; it might well be the most important. Since this accomplishment, all the services use the same name and number for the same item. Before, there were 27 different numbering systems and 8 different classification systems. Little could be done in the way of supply integration under these circumstances, since the services were faced with a situation not unlike using a Montgomery-Ward catalog to order items from Sears.

One such case involved fatigue uniforms. The services had and used eight different fatigue uniforms—made from seven different types of material—which consisted of 153 Federal Stock Numbers. After the Armed Forces Supply Support Center reviewed the situation and made a decision to cut this down, the services adopted two uniforms, both made of the same material. This resulted in 127 Federal Stock Numbers being deleted from the Military Clothing and Textile Supply Agency system.

Making one system out of 27 different systems was not an easy task. Congress recognized the need and passed the Defense Cataloging and Standardization Act which was effective on July 1, 1952. At that time it was impossible to compute how many actually different items were being bought, stored and used under the multiplicity of existing numbers. Congress and the military roughly estimated that there were four to five-million actually different items in the system. Average for a Sears-Roebuck Catalog is around 100,000 items.

Six years later, after the biggest describing, identifying, numbering and record conversion job in history, there was a single catalog in use throughout the military supply system. During the six year period, and in response to the tremendous technological breakthroughs of the times, new items were entering the system at a rate of 500,000 per year. Yet, when the catalog was completed, converted to use, and the totals computed, only 3.4 million separately numbered items were listed. The multiple numbered screwdriver was listed under one common number and the neighbor's storeroom was available for community use.

Nerve center of the Federal Catalog System is the Armed Forces Supply Support Center, one of the agencies integrated into DSA. On a huge electronic computer in the Center all items in the federal catalog, whether defense or other government agency items, are recorded on magnetic tape or punch cards. The central electronic memory knows who uses what item, the various manufacturers' part numbers, the item specifications, the type of packaging, and the right freight classification code to assure the lowest transportation cost to the government. Fanning out from the Center to each inventory manager in Defense is a wire transmission, rapid communications network which speeds information on each proposed procurement and on the availability of community owned storeroom material.

Small Business Advisor

The American taxpayer has invested more than $150-million in the development of the single catalog system. It has proved to be a worthwhile investment which has returned many times the initial cost.

These and many other improvements made to the supply operation during the reign of the separate Single Managers will play an important part during the formulation stages of the new Agency. One improvement to be incorporated into the new staff will be a Small Business Advisor to Gen. McNamara to monitor contracts, sales, etc., insuring small businesses getting their share.

Primarily, what the whole unified supply system boils down to is the fact that, like other moves he has made in the Defense Department, Secretary McNamara hopes to bring his organization closer together, permitting him to keep a closer watch on what's going on where, and when. The setting up of DSA eliminates the old problem of too much chain of command. The chain of command now, as set up by McNamara, will mean the activities reporting to Gen. McNamara, who will in turn report directly to the Secretary of Defense himself. ■

Communications

(Continued from page 117)

were only the sketchiest provisions for cross-utilization of another service's network to keep vital information flowing. (Often it amounted to the hazardous placing of a telephone call from a member of one service who just happened to know the man in charge of a sister service's channel because he played golf with him earlier and got to know who the man was.)

Sums up Irvin: "The major function in the Operations area is operational control and supervision of the DCS. This function includes allocating and reallocating communications channels within the system, allocation of standby facilities, emergency restoration and in general, exploiting the full capabilities of the system as it configured at any one time."

And, says Irvin of the whole communications challenge, "within DCA we have developed a modern approach to this management task in the employment of modern technology and management concepts in keeping with the increasing demands of new weapons and their manifold support requirements—which in turn have far reaching effects on long line communications requirements.

"The demands of present day complex weapons systems coupled with the increasing size, composition, and deployment of Defense forces world-wide have caused military communications to grow to their present proportions. To meet the need for accuracy, speed, reliability, survivability, and capacity, more growth and improvement are dictated.

"National strategy and wielding of our tremendous military might in the execution of our national policy demands a communication capability of enormous volume, speed of delivery, flexibility, quality and reliability. The collection, cross-exchange, in-and-out flow and wide dissemination of intelligence of many varieties has become a requisite to effective command on high levels, and speed has become the byword."

Basically, to help the services help each other fill that demand is DCA's job. ■

R&E—WSEG

(Continued from page 90)

4. Effect long-range considerations of possible uses of new weapons and military techniques.

The Review Board consists of the Director of Research as Chairman, the two Assistant Directors, the three senior service members, and the Executive Secretary serving as recorder.

The Secretariat handles administrative matters including personnel, records, security, budgeting, transmission of WSEG reports, preparation of Task Orders, and procurement of technical information.

The London Office is the U.S. Operations Research Group's liaison representative for the United Kingdom. Normally staffed by one WSEG representative and a representative from one of the three military OR groups, the office maintains liaison between the OR groups of DOD and the various OR groups in the U. K. and NATO.

The Editorial and Publications Staff is responsible for the editorial, typing, graphics, and reproduction work required to issue WSEG's reports, staff studies and other publications.

The IDA Administrative office provides administrative support for the Director of Research.

Sums up Dr. C. A. Boyd, WSEG's Research Director, "We have to have operations research work, but we have to have more than that. We must look as far ahead as we can . . . no even in terms of years. When something happens, we have to be able to say, 'this is the impact of the thing.'

"There is no recipe for weapons systems evaluation. You can't put it in numbers. It requires a continual examination of the country's strategic posture and you always need new ideas. Few people realize it, but one of our most important groups is concerned with social sciences—manpower, economics, psychology and politics. We have to examine these areas.

"There is no single measure for a weapons system. We have to think about cost, availability and effectiveness. It all depends on the situation. Our job is to be helpful and to produce a true, factual picture." ■

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In My Opinion

Of Great Value

As part of our Management-Employee Communication Program, we are supplying to our civilian and military executives the reprints of probing and challenging articles.

We have found the article "Managing 'Thinkers' Takes Time, Talent" by Joseph A. Anderson in your August 1961 issue to be of great value to our program. May we have your permission for reprinting and internal distribution within the Army Ordnance Missile Command?

Walter Wiesman
Management-Employee Communication Advisor
Army Ordnance Missile Command
Redstone Arsenal, Ala.

Right Steps Taken

Since leaving Washington, I have been following developments there through personal contacts and by a careful perusal of the ARMED FORCES MANAGEMENT magazine. I must confess that I never fully appreciated the grand job that you are doing to keep us all advised in the area of national defense.

With particular reference to financial aspects of management, I am happy to see the continued development of long-range planning. As you know, I did not feel that I was in a position, and I am sure Tom Gates shared this feeling, to take any drastic steps to revise the existing system. Under the circumstances, I did not even fill the post of Deputy Assistant Secretary after John Sprague left since it was my feeling that a reorganization should not be undertaken by me or by my successor until after the election of a new President.

However, real progress had been made in long-range planning in many areas. For example, in our last budget review, the Army did a very thorough study of its current and future needs. This program was reviewed not only by the Comptroller's office but also by the Assistant Secretary of Defense for Supplies and Logistics before the budget was adopted. The same long-range planning was true of missiles and other special programs like the Polaris submarine. Much, of course, remained to be done but these were all steps in the right direction.

The creation of a Defense Supply Agency is also a real milestone and yet it constitutes but another step in the inevitable development toward one service.

Many of the reforms now being implemented are obvious to anyone coming into the Defense Department from the outside. The problem is to merge proposed changes into the existing system in such a way as to continue to command the loyal support of the people charged with the duty of carrying out the revised program.

This gives rise to the question of whether evolution or revolution is the appropriate method for reform. Perhaps in the last analysis these two concepts are identical in results, if not in method. As I remarked many months ago, when you look at the broad sweep of developments over the past twenty years, a definite pattern of progress is discernible. I am sure that the next twenty years will be just as productive.

I retain a very high regard for the military and civil service people in the Pentagon. Without their dedication and continued support, no one, regardless of his personal ability, can be successful. That there are differences of opinion is to be expected. In my judgment, such differences are a strength, not a weakness. I know that you share this viewpoint. I trust that your publication will continue to reflect the considered views of various services and will continue to make the same fine contribution to our defense as it has in the past.

Franklin B. Lincoln
President, Monroe Calculating Co.

Investigation Demanded

The reprint of Diogene's commentary on P. 47 of the September issue was read and received as a refreshing breeze among the civilian employees here at the AFMTC. Even many retired military, appalled at the abuses of the military over civilians at this Center, applauded your action. It is recognized that cessation of the preferential hiring of retired officers would not lead to "an exciting and demanding prospect for higher level job responsibilities with better career opportunities, etc. etc.," since the select cadre is already entrenched.

The statement of the Pentagon lawyers was noted with raised eyebrows. If the $10,000 dual income limitation applies to Reserve Officers it is not

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recognized either here or at the Pentagon and is not covered by the Regulations. If it turns out that the Pentagon lawyers are correct, the Government will surely inherit a windfall of refunds!

The usual twisting of statistics was instantly recognized. If the 5,000 special category are GS-12 and above, then that figure should be compared to the total GS-12's and above and not the 1,000,000 which includes the entire gamut of the GS system.

The AF double talk to the effect that "changing demands of military technology sometimes require skills possessed by retired Reserve officers, etc. etc.," is amusing. Illustrations to belie this canard are legion, the most obvious that of the Director of Civilian Personnel. How does being an Infantry Colonel bring skills of military technology which an individual trained and experienced in civilian personnel matters does not possess? In any event, the Reserve officer, without status, is hired under the same Civil Service Regulations as the non-military civilian with status—or is he?

This matter should be investigated as should also other curious practices, particularly that of automatic yearly outstanding ratings, meritorious citations, and the like, which have contributed to make a shambles of the Career Development Program. There are other areas which would merit a look-see if a peek under the rug were made. It will never be known how many competent and promising individuals have had their career sabotaged and their spirit broken because they made the mistake of criticising the system or exercising their prerogative of using the grievance devices (which is tantamount to entering the spider's parlour)—nor how much talent has been lost to the Air Force by those who were able to leave.

(*name withheld by request*)

Retired Officers Defended

Two items in your August issue fairly cry to be married to each other. Bill Hurley's article on "How to Clobber Communications" points out the fallacies of "censorship" in the defense-industry team advertising, and does so from the approach we used in geometry class . . . by presenting several propositions as "given."

To requote: "Given: That the 'Defense-Industry teams' concept is potentially the most sound, productive method of successfully utilizing a democratic nation's economic strength (as Defense says it is) in waging the cold war."

"Given: that only a small minority of us are thieves . . . and most of those are already in jail."

Tying these two theorems in with the item on DOD's definition of "selling" by retired officers, gives another method of clobbering communications between Defense-Industry.

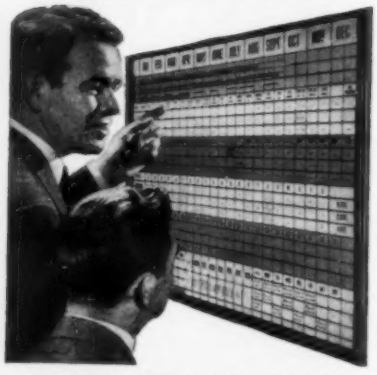
Since we have yet to find the omniscient person on earth it seems to follow that in our all out cold war effort, we should use as many team members as we can. Certainly, it stands to reason that a man who has had both military and industrial training is a valuable "communicator" between Defense and Industry.

The innuendo that even some retired officers (not yet in jail!) are in fact exercising some manner of "undue influence" fairly cries out for those who are saying it, or advocating the cause, to name names; give facts; and get down to specifics. The recent directive has caused appreciable hardship to many retired officers.

AFMA can do a tremendously patriotic service, by calling the hands of the people who categorically claim that the government is harmed by the activities of retired officers in defense industry. Let's smoke these people out, and make them put *facts* behind their charges.

Joseph K. Taussig, Jr.
Captain, U.S. Navy (Ret.)

How To Get Things Done Better and Faster



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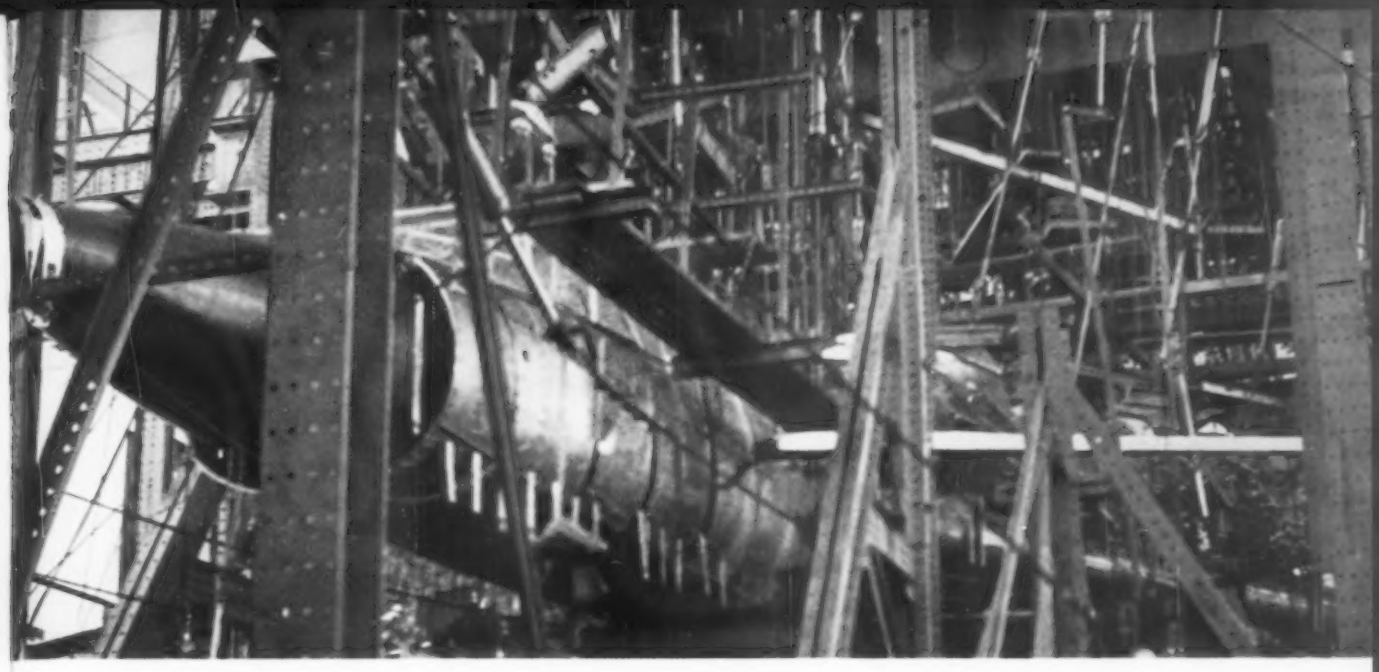
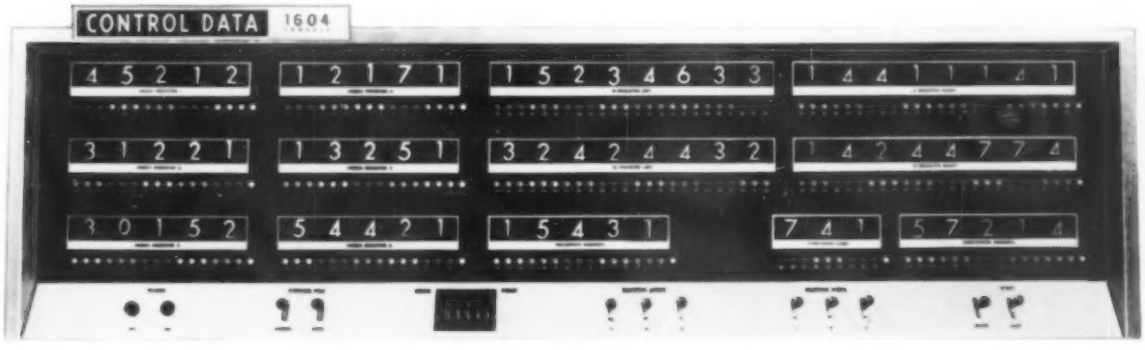


CONTROL DATA 1604: KEY TO FLIGHT SIMULATION

From the early days at Kittyhawk to the present, structural design of aircraft has kept pace with increases in speed and altitude. So it is with testing. Whereas structural testing was once determined largely by static methods, today's flight environments demand the effects of time-dependent thermo-mechanical loads.

To aid engineers in testing structural design of aircraft and other flight vehicles is one of the tasks of a Control Data 1604 Computer at the United States Air Force Aeronautical Systems Division, Wright-Patterson AFB, Ohio. As an integral component part of the Structural Test Facility "High-Speed Data Acquisition and Processing System" it receives tremendous volumes of data during structural integrity testing, and reduces and analyzes data involving all or part of a given "mission." Under "real-time" test conditions, the 1604 performs all necessary computations to process, display, and record these data.

Thermo-mechanical test results can now be analyzed in minutes rather than days following a test; thus, necessary design changes can be made before the vehicle becomes operational. The speed to execute 100,000 instructions per second, the built-in precision, the large storage capacity of the 1604 Computer are today being used to aid man in providing safer, higher-performance flight vehicles.



CONTROL DATA CORPORATION

COMPUTER DIVISION

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How the Phantom II Affects Multiple-Mission Economy

The combat value of an aircraft carrier is directly related to the strike capability of its aircraft. Navy planners, seeking to increase the combat potential of aircraft carriers, are vitally aware of the economic advantages of aircraft capable of more than one mission. The Navy's new two-mission fighter, the Phantom II, can effectively deliver huge loads of conventional or nuclear ground strike weapons while retaining full capability for instant conversion to an air-to-air fleet defense mission.

Sparrow III missiles for anti-air warfare are semi-submerged in the fuselage and are carried on all missions. The Phantom II literally flies its own cover on ground attack missions because it retains full capability for air defense at any time.

Great numbers of conventional bombs, napalm or fuel tanks, or nuclear weapons are slung beneath the wings and the fuselage for delivery against ground targets. Simply varying the armament load of the Phantom II fits the carrier force to shifting combat situations regardless of weather, day or night.

Multi-mission weapons delivery capability is but one of the advantages of this Mach 2+ fighter. Performance is another. The Phantom II demonstrated maneuverability, range and speed in capturing world closed course speed records for both 100 and 500 kilometers. It has reached an altitude of 98,560 feet and has a dash speed in excess of 1500 mph. The combat-equipped Phantom II operates easily from existing 5000 foot runways.

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